



Dairen Chemical Corporation



2020 ESG Report



Chang Chun Group

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About this Report

This Report is divided into four major chapters: in terms of responsible manufacturing - we provide a safe manufacturing environment and continue to innovate our research and development while committing to providing product quality and services that meet the satisfaction of customers; in terms of low-carbon sustainability - we facilitate circular economy, implement pollution prevention, and fulfill social responsibility of environmental protection; in terms of integrity - given that integrity is our business philosophy, we engage in proactive communication with stakeholders to jointly create a sustainable future; and in term of social inclusion - to show our uncompromising dedication to talent cultivation and social contribution, this Report demonstrates DCC's performance and commitment to society on sustainable development, reaching the business goal of environmental sustainability and corporate sustainability.

Scope and Boundary of this Report

The scope and boundary of this report includes DCC Taipei Headoffice, factories in Taiwan and four production factories abroad. Please refer to 1.1.1 Key Products and Location of Operation.

Reporting Period and Issuance Date

DCC issues a sustainability report of the previous year on a yearly basis. The "2020 DCC Sustainability Report" will be issued in June 2021 and the disclosure period runs from January 1, 2020 to December 31, 2020. In order represent changing trends, certain data in this Report covers data in the past 3 years (2018-2020). Where other data differs from the aforementioned disclosure scope, it will be specified in that chapter. If the currency is not specified, it shall be the New Taiwan dollar.

Report Preparation and Assurance

This Report is prepared by DCC's CSR Executive Secretariat, 4 CSR teams, all departments of the Taipei Executive Board, all factories in Taiwan, and six factories abroad. All contents of the Report have been approved by CSR Committee to ensure their accuracy and that they meet the expectations of stakeholders.

The Company has entrusted Ernst & Young Associates (EY) to perform limited assurance in accordance with the Assurance Standards Bulletin No. 1 of "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" (formulated with reference to International Standard on Assurance Engagements ISAE 3000) issued by the Accounting Research and Development Foundation (ARDF). The selected information, applicable standards and limited assurance report are enclosed in this Report.

Report Compliance Standards

The contents and structure of this Report are based on the requirements of core options of GRI Standards issued by the Global Sustainability Standards Board (GSSB). This Report has been prepared and disclosed in accordance with the Sustainability Accounting Standards - Chemicals issued by the Sustainability Accounting Standards Board (SASB). This Report fully represents DCC's policies and implementation performance regarding the management of the ESG material topics. For the SASB Index and GRI Index, please refer to the Appendix.

Contact

Please contact us if you have any questions regarding the contents of this report.

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Message from the Operator

Looking back at 2020, the COVID-19 outbreak completely changed the global economic model, resulting in the rapid growth of robots, IoT and industrial automation. Moreover, after the carbon neutral target was proposed in the EU, Japan, Korea and China also proposed their respective carbon neutral target timeline. On top of that, the EU will impose a carbon tariff, meaning cost of sales to the EU will increase. As a member of the global village, we believe that future production and operations within the industry will look very different in the post-pandemic era. We will accelerate our progress on smart manufacturing and expand AI applications, while deepening climate change management to construct low-carbon processes. By taking this approach, we will, at the same time, pursue the 3-win position of “environmental, social and governance (ESG)” to build a solid century business.

Effective Safety Management Culture

At DCC, we regard industrial safety and health management as one of our important practices. In 2020, we attained the ISO 45001 occupational health and safety management system conversion verification. By doing so, not only will we ensure the implementation of the applicable laws and regulations, we can also emphasize the importance of safety discipline and industrial safety education, while at the same time enforcing industrial safety inspection. Moreover, we continue to carry out reviews, making improvements and providing assistance to our contractors to help improve their work safety awareness. These efforts make work safety maintenance a daily habit for DCC employees. Take Panasonic Corporation’s religious management philosophy as an example, activities such as daily chanting and cleaning may seem insignificant, but employees never compromise, allowing the implementation of safety management into life.

CCPG Executive Board Chairman - Lin Shu-Hong cares deeply about industrial safety and health management, he feels it is his duty to pass down his life experiences to the younger generation. Through working with Petrochemical Industry Association of Taiwan, he has obtained the license for the book “Foundation of the Basics of Industrial Safety” from the Safety Consultant Arai Yasukazu of Mitsubishi Chemical Corporation, the book’s author. The book was translated into Chinese to help employees at DCC apply safety management to their daily work. It is also used as a teaching material for training, enabling all companies in Taiwan better implement safety management and further prevent industrial accidents.

Leading Green Smart Manufacturing and Breakthrough Innovation

We value the importance of smart manufacturing and believe that promoting Industrial 4.0 will keep ourselves competitive. At the same time, we have developed a number of AI applications, such as optimal unit load capacity and steam distribution. Thanks to the high ERP integration feature of the self-developed “iSender” for communication within companies, managers are able to quickly grasp any situation and take necessary prevention controls. Our iEar project can automatically detect whether equipment is producing irregular sounds so that accidents can be avoided in advance.

Quality persistence, product innovation, and helping other industries to innovate and transform for a low-carbon sustainable future are the core principles that keep DCC resilient. Our developments include products that pose no harm to humans or the environment, such as thermal insulation coating with low VOC content for building materials and raw materials for biodegradable plastics. Through process improvement, we continue to improve production capacity, and in 2020, Dafa Factory was awarded an Excellent Manufacturer for Effectiveness of Heat Integration by the Industrial Development Bureau, MOEA.

Concerned Climate Change and Environmental Issues

We attach great importance on corporate sustainability topics, and in 2019 we introduced the Task Force on Climate-Related Disclosures (TCFD) guideline framework. In 2020, 8 climate risk events were identified and assessments of the impact on DCC operations under the extreme climate threat were conducted. After analysis of the data, we began to formulate countermeasures, such as setting up an energy conservation and carbon reduction promotion organization and reducing the original unit consumption of products by 3% each year. We have paid particular attention to the EU Taxonomy Regulation published by the EU 2020. On energy conservation and carbon reduction, we not only promote energy use efficiency performance in a bid to reduce carbon emission intensity of our products, we also end “greenwashing” with tangible actions. As a means of gradually making efforts regarding environmental protection, in 2020, 2 of DCC’s exchange projects were approved by the Environmental Protection Administration (EPA) and in return we obtained 11,676 tCO₂e of credits.

Cultivate Talent to Expand Positive Influence

Retaining quality and diverse talent is the foundation of our longstanding operations, while “core functions, management functions and professional functions” is our focus when training talent. At DCC our e-Learning Platform allows our employees to learn without being restricted by time or location. Through a comprehensive training system, we hope to oversee the growth of every employee and help them reach their goals within the organization.

As we value the idea of “train locally and hire locally”, we give priority to local residents when we take on new recruits. 85% of employees at DCC Kaohsiung Factory and Dafa Factory are from the local areas, and we hope to convey our positive influence on local communities via our employees. Through local talent cultivation, this can be deepened and expanded to the wider society. In 2020, DCC took part in and sponsored a total of 64 social contribution projects in Taiwan and overseas.

Looking ahead to 2021, we will continue to adhere to our business philosophy of “integrity, customer first and creative innovations”, and do our utmost to grow hand in hand with our stakeholders. We will also enforce sustainability directives such as corporate operations, environmental protection and social involvement, while aligning with the UN’s Sustainable Development Goals (SDGs) to demonstrate DCC’s determination to achieve sustainability.

Chairman

Lin Shean-Tung



1 CHAPTER

Responsible Production



- 1.1 About DCC
- 1.2 Green Products and Service Quality
- 1.3 Occupational Health and Safety

Key Performance



103 patents

The R&D expenses invested by us accounted for 5.1% of the Company's profit before tax, with a total of 103 patents obtained.



643 cases

In 2020, 643 proposals for improvement were proposed



NT\$553 million invested

In 2020, NT\$553 million was invested in safety and fire prevention



Awarded Excellent Underground- Piping Model

Dafa Factory and Kaohsiung Factory were awarded with Excellent Underground-Piping Model



Awarded Advanced Fire Fighting Factory

DCCJS - Took part in the firefighting skills competition and came second; the factory has won the first prize for Park safety production management for a number of years and was once awarded the annual advanced group in firefighting by the Park

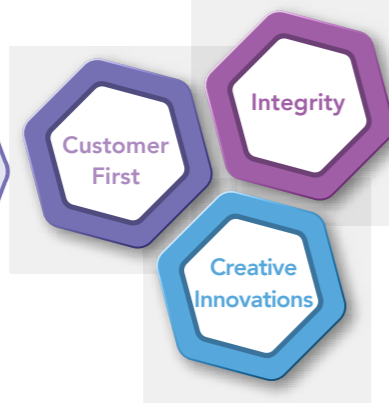
Adhering to the principle that “the environment is our most valuable asset, therefore environmental protection is an unspoken responsibility”, DCC introduce the world’s most advanced technology and equipment, while insisting on constant refinement of manufacturing processes, promotion of industrial waste reduction and implementation of pollution prevention. At the same time, we research and develop all types of production technology aiming to improve waste treatment efficiency, and regard “environmental sustainability” as one of our prime objectives, making every effort to fulfill our social responsibility towards sustainable management.

1.1 About DCC

In 1979, Dairen Chemical Corp. (DCC) was established as a joint venture of Chang Chun Plastics Co., Ltd. (CCP), Chang Chun Petrochemical Co., Ltd. (CCPC), and Nan Pao Resins Chemical Co., Ltd. DCC manufactures vinyl acetate monomer, and is the third largest core company of CCPG. DCC adheres to the business philosophy of integrity, customer first and creative innovations and does its utmost to provide customers with comprehensive products.

► Business Philosophy

Under the quality policy of “Improve our quality, Satisfy our customers”, our products are well-received worldwide. DCC provides customers with more competitive product quality and prompt services from raw material procurement to the quality of products delivered to our customers.




As “integrity” is the essence of DCC’s business philosophy, we treat others with honesty and fairness to ensure that all customers are able to receive our services with peace of mind, while also gaining trust from the government, employees, suppliers and society.

“Innovation” is our longstanding dedication and constant motivation as we commit ourselves to improving production manufacturing and enhancing product quality. At DCC, we make every effort to research and develop when it comes to new products.



1.1.1 Key Products and Location of Operation

DCC started its business by manufacturing vinyl acetate (VAM). Our Kaohsiung Factory was put into operation in 1983 and is the only factory in Taiwan manufacturing VAM. VAM is used as a raw material for vinyl acetate-ethylene copolymer emulsion (VAE) and polyvinyl alcohol (PVA) and for the supply to domestic and foreign markets. In a bid to meet expectations of our customers and improve the competitiveness of our products in the market, since its establishment, we have been dedicated ourselves to strict quality management, environmental assessment and protection, product research and development, process improvement, enforcing responsible care as well as implementing full electronic automation and business. At the same time, we develop diverse chemical products for multiple purposes and have set up global production and marketing bases.

<div>  Dairen Chemical Corporation No.8-1 Huaxi Rd., Dafa Industrial Park, Daliao District 83164, Kaohsiung, Taiwan </div> <div>Company Ownership and Legal Form Company Limited</div>				
Locations of Operation in Taiwan		Overseas Operations		
		China	Southeast Asia	
	Factory	Abbreviation	Factory	Abbreviation
Taipei Head Office,				
Mailiao Factory,	Chang Chun Dairen Chemical (Panjin) Co., Ltd.	CCDPJ	CCD (Singapore) Pte. Ltd.	CCDSG
Dafa Factory,	Dairen Chemical (Jiangsu) Co., Ltd.	DCCJS	Dairen Chemical (M) Sdn. Bhd.	DCCM
Kaohsiung Factory				

DCC has successfully self-developed the 1,4-butanediol (BDO) and VAE emulsion and has become a major international manufacturer. We persist in investing in R&D and commit ourselves to researching and developing new products and processes aiming to grow stronger and increase corporate competitiveness. The main description of our products can be found at “Market Application” on our website.



Electronic catalog

Key Products	Major Applications of Products	Major Markets
Vinyl acetate, vinyl acetate-ethylene copolymer emulsion, vinyl acetate-ethylene redispersible powder, allyl alcohol, 1,4-butanediol, and Polytetramethylene ether glycol, and 2-methyl 1,3-propanediol	Chemicals, coatings, resins, adhesives, paints, civil engineering, elastic fibers	Taiwan, China, Asia, America, Australia, Europe and Africa

At DCC, we make products that are closely related to people’s everyday life. Our products include (adhesive for food packaging and adhesive for paper straws), clothing (sports elastic clothing, wrinkle-free suits, and PU sole materials), housing (energy conservation in buildings, eco-friendly water-based paint, furniture decoration), transportation (automotive precision parts), entertainment (electronic products and toy packaging materials), consumer solutions (cosmetics and cosmetic facial masks), etc. Our products are an indispensable part of people’s daily life.

We accelerate our research and development through understanding the needs toward sustainability of our customers and consumers by investing in innovative technologies, manpower and resources in green products, such as: process improvement, reduce the use of raw materials and waste emissions. By doing this, not only is our product competitiveness increased, but we also bring more sustainable and environmentally friendly value to the world.

DCC Product Life Map

Vinyl acetate monomer (VAM)
It is the raw material of VAE emulsion and polyvinyl alcohol (PVA), and can be used in the adhesives industry and other related industries.

Food

Glue for food packaging

Vinyl acetate-ethylene copolymer emulsion (VAE emulsion):
VAE emulsion features good adhesion, and is particularly suitable for paper and plastic packaging adhesion. VAE emulsion with low VOCs and toxicity can be used for food packaging and paper straw adhesion.

Clothing

Clothing adhesive

Vinyl acetate-ethylene copolymer emulsion (VAE emulsion):

Can be used as the printing adhesive for patterns on clothes, T-shirts, and the adhesive on female underwear.

Living

Building energy conservation, Environmentally friendly water-based paint, Furniture decoration

Vinyl acetate-ethylene redispersible powder (VAE powder):
Can improve the adhesion strength of mortar to different substrates, while enhancing the durability of mortar. Mainly used in ceramic tile adhesive mortar, interior/exterior wall surface mortar, self-leveling floor mortar, waterproof mortar, exterior wall insulation mortar, repair mortar. It can also achieve the purpose of exterior wall insulation and energy conservation in buildings.

Ethylene-vinyl acetate-vinyl chloride emulsion (EVA-VC emulsion):
Can provide a wide range of adhesion for many types of substrates, particularly for adhesion of glass fiber, metal, plastic film, porous substrates, wood, and wallpaper.

Entertainment

Adhesive for toy packaging cartons

Vinyl acetate-ethylene copolymer emulsion (VAE emulsion):
VAE emulsion can be used as an adhesive for non-polar materials, such as PE, PET, PP, and OPP, and is used as an adhesive for toy packaging cartons.

Consumer solutions

Cigarette adhesive

VAE emulsion with low VOC content:

Low-VOC, formaldehyde-free, quick-drying, wet adhesion, and is suitable for high-speed cigarette rolling, and interface and packaging adhesives.

DCC Product Life Map

Allyl Alcohol (AAL)
It is a raw material of BDO, MPO and PTG

Clothing

Sports elastic clothing, wrinkle-free suits, and PU sole materials

Polytetramethylene ether glycol (PTG):

It is the primary material of polyurethanes (PU), polyester elastomer (TPEE), and can be used to make elastic fabrics: pantyhose, swimwear, sportswear, diving suits as it increases the stretchability and comfort of the fabrics, and reduce the tightness. It can also be used for gears, soles of skates and inline skates, shoe materials, and electronic parts.

Transportation

Safety glasses lenses, electronics, automotive precision parts, and home appliances

Allyl Alcohol (AAL):

Can be used to manufacture the lenses of safety glasses and DAP resin. DAP resin is suitable for injection molding products, such as electronics, automotive precision parts, and home appliances.

Entertainment

Electronic products

1,4-Butanediol (BDO):

It can be used to manufacture PBT engineering plastics, such as a outer shells and electronic parts and electronic products.

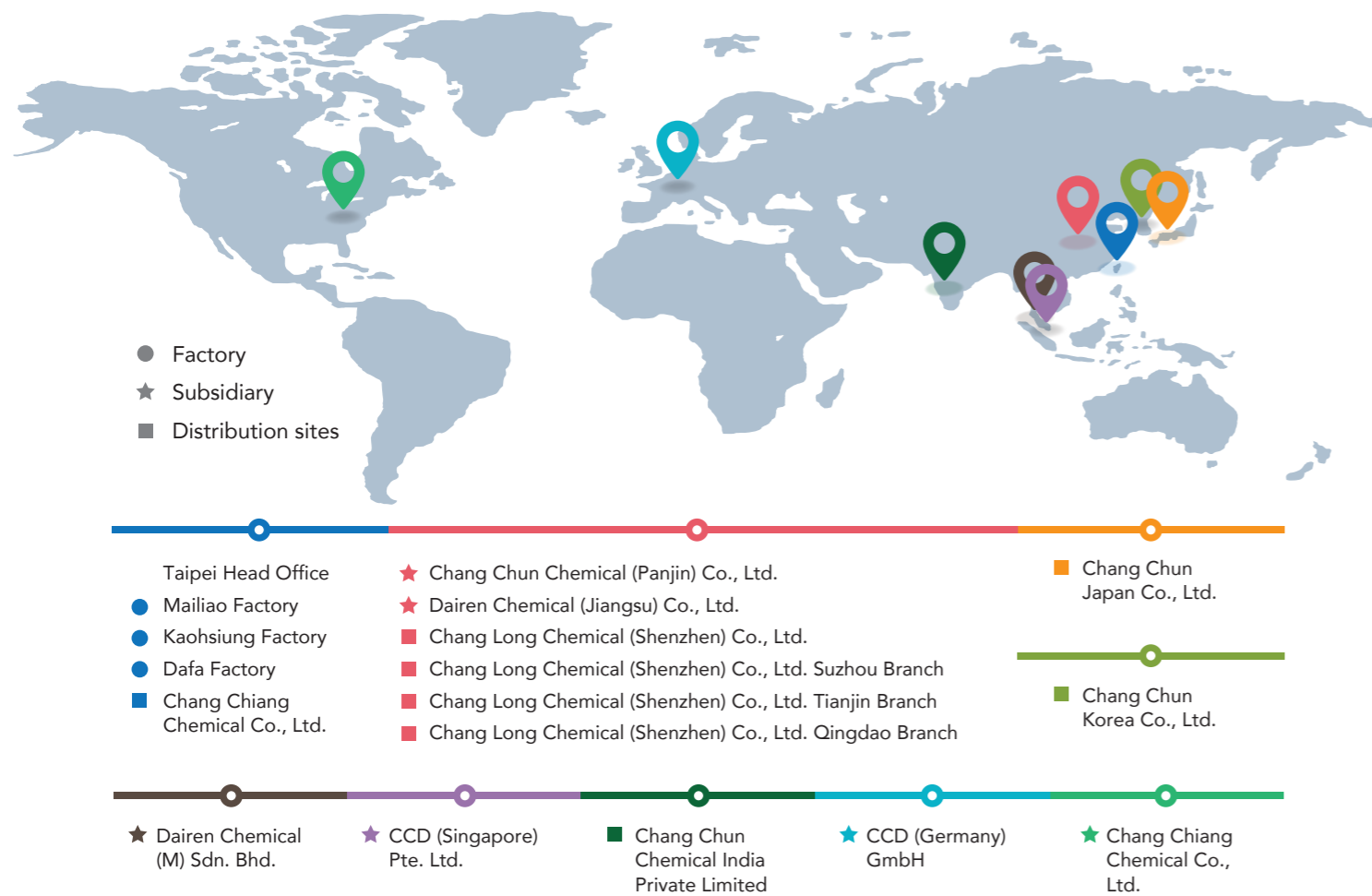
Consumer solutions

Face mask sheet, elastic fiber

2-methyl 1,3-propanediol (MPO):

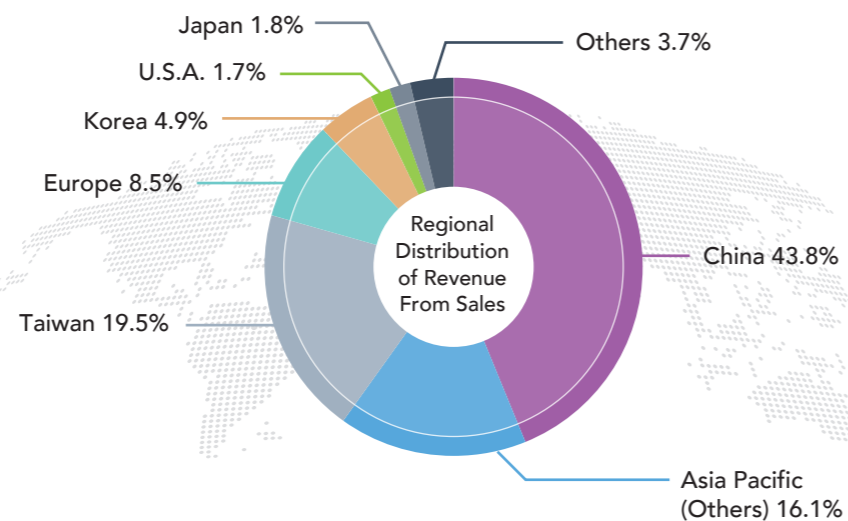
Used in the formulation of cosmetics and cleaning products.

► Global Locations of Operation



1.1.2 Operating Performance

In 2020, DCC's revenue and profitability maintained steady growth. Our products can be found worldwide and we are currently reinforcing development in Europe, the U.S. and emerging markets. Where there are earnings for the year as a result of the Company's stable financial performance, these earnings are distributed as dividends to shareholders. The Boards of Directors of the companies have proposed the motion for the 2020 earnings distribution, which is to be distributed in 2021.



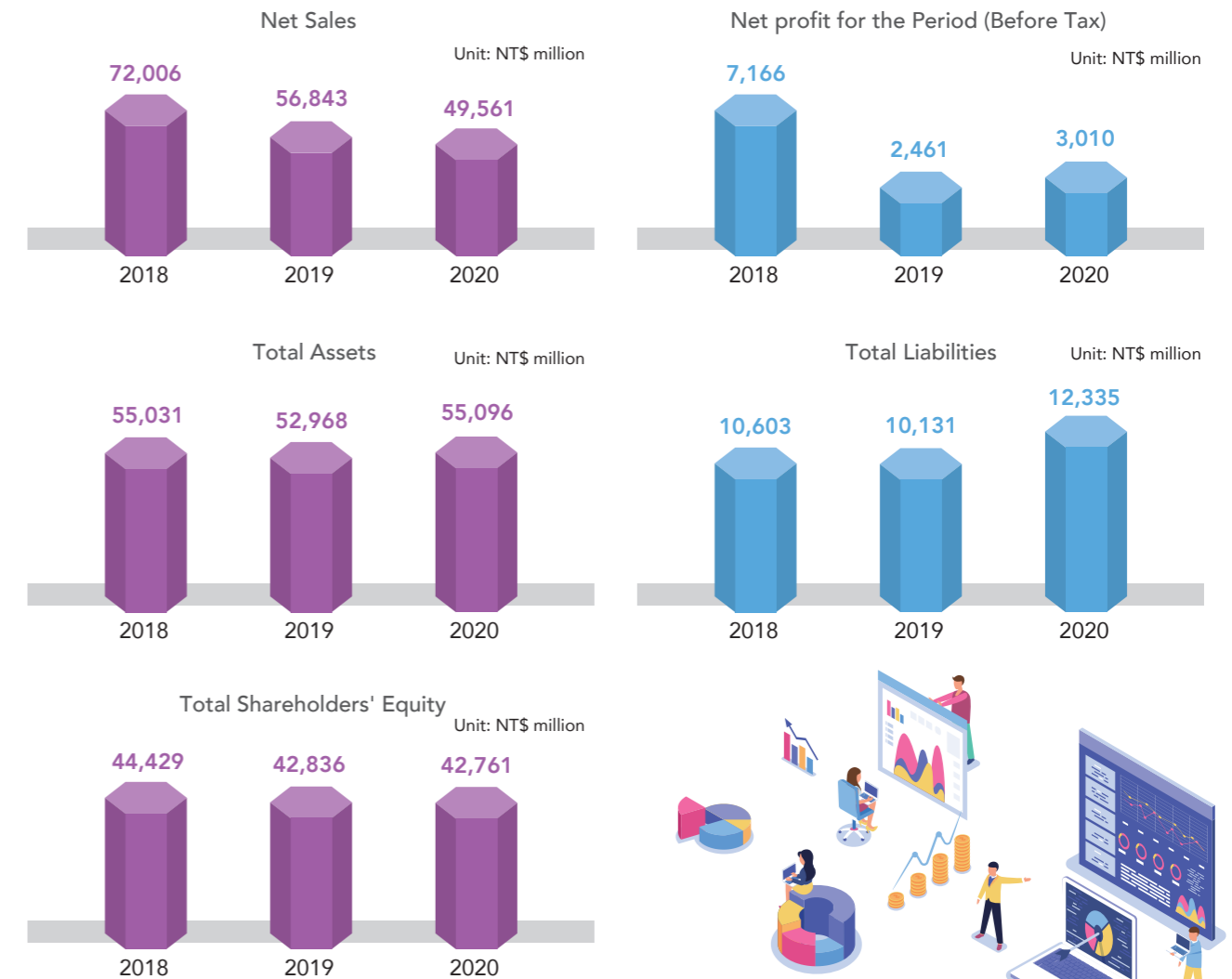
Sound financial performance is mainly reflected in the operating income growth and the ongoing improvement of profitability. This is the key to a company's sustainability. Thanks to DCC's recent remarkable financial performance and the creation of long periods of stable economic values, we were given tw AA- ratings from Taiwan Ratings.

Note: DCC's credit rating was included in the parent company's - CHANG CHUN PETROCHEMICAL CO., LTD. (CCPC), as an independent credit rating was not conducted for DCC.



Taiwan Ratings QR code

► 2018-2020 DCC Operating Performance



Note: This table shows numbers from consolidated financial statements certified or reviewed by CPAs. In addition to the boundaries of the Report, it includes information of merged subsidiaries.

In 2020, the economy worldwide was badly affected by the US-China trade war and the pandemic outbreak. With the generally poor performance of global consumption, our products also took a severe hit. Although our sales were lower compared to previous years, we persisted on focusing on increasing product competitiveness. Given such effort, we managed to maintain a profit even faced with such challenge.

QR code for DCC
2020 Consolidated
Statements

1.2 Green Products and Service Quality

As DCC insist on chemical material professionalism and product quality, we have been able to use our core capabilities to offer help to other industries to innovate and transform for a low-carbon sustainable future. DCC pride ourselves as a reliable material supplier. With the intention to continue to provide our customers with top-notch products, we have established a comprehensive quality policy to strengthen process controls and ensure product quality and a stable supply chain. We value the needs and opinions of all our customers and perform rigorous chemical and product management. In the meantime, we are heavily investing in innovative R&D for green processes and products.

1.2.1 Green Process and Products

At DCC, our products span across plastic additives, adhesive, chemical electronic materials, medical intermediates, industrial intermediates, and resins. As the awareness in environmental and CSR issues have increased in recent years, DCC and related industries in Taiwan are faced with tough challenges in terms of environmental protection and sustainable development. Saying that, there are a number of important issues we must address.

With R&D being the development focus of DCC, the DCC Executive Board has formed an Innovation Research Division and Application Development Division; there are also R&D Departments in all factories in Taiwan, continuing to facilitate innovation through the internal value chain. Meanwhile, we take into account economy, energy, environment, process safety and CSR, and proactively research and develop based on the goal of sustainable development, while implementing circular economy through energy/resource integration and green chemical technology.

► Challenges Faced by DCC and Their Solutions



Innovation Research Division

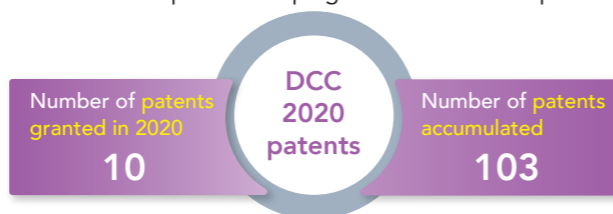
New product R&D planning, progress tracking and execution of results assessment, instructions and reviews of patents and intellectual property rights applications for new products and processes.

Responsibility Division of the R&D Team of DCC

Application Development Division

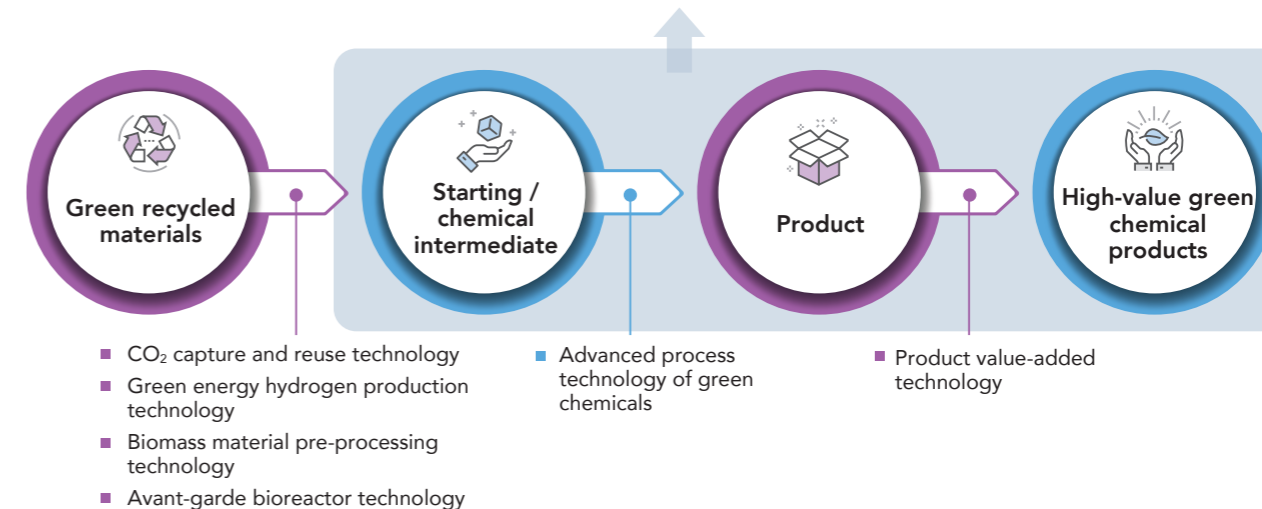
Existing product R&D planning, progress tracking and execution of results assessment, instructions and reviews of patent and intellectual property rights applications for existing products and processes.

DCC continue to invest in R&D resources -our R&D investment in 2020 accounted for 5.1% of the Group's profit before tax, worldwide patents have accumulated numbers to 103. Furthermore, we carry on our engagement in industry-academia cooperation development and strategic partner alliances. The annual investment is over NT\$6 million. Our partners include National Tsing Hua University in the Forward-Looking Technology Industry-University Cooperation Program which is currently in its 7th year. We also work with National Taiwan University, National Chiao Tung University, National Central University, National Chung Hsing University, Yuan Ze University, Chung Hua University, National Taiwan University of Science and Technology, National Chung Cheng University, Industrial Technology Research Institute, Plastics Industry Development Center, as well as Food Industry Research and Development Institute. With our R&D direction of green chemistry, process enhancement and biomass, we assist the Group in developing new value-added products, upgrading core technologies of existing products, optimizing existing processes, while enhancing the professional knowledge of the Group's research. The major innovations and achievements of DCC will be detailed later in this Chapter.



► DCC's Next-Generation Green Chemical Technology Innovation Development

- **Assessment prior to R&D:** The Group's R&D programs are performed in accordance with the Management Operating Procedures of Toxic and Chemical Substances of Concern.
- **New product development:** Reduce the use of management substances of very high concern and carry out environmental impact significance assessment.
- **Existing products:** Promote solutions to replace management substances of very high concern in order to reduce health and environmental hazards.



Looking to the future, DCC intends to invest in renewable energy raw materials, biomass raw materials, and healthcare materials. In addition to establishing green technologies from upstream raw materials to downstream products, we also enhance process efficiency and biodegradable materials R&D and certification through the development of high-value technologies for green energy, biomass processes and products, including carbon capture, volatile organic compounds (VOCs) and toxic waste reduction and development. Not only does establishing a technological threshold enable our products to maintain their high competitiveness, it also gives an advantage in the transformation trend of the shoal gas and coal chemical industries, becoming a benchmark in response to climate change.

The DCC attaches importance on the impact posed on humans by chemical substances of very high concern. Through assessments prior to R&D and new product development, the Group reduces the use of chemical substances of very high concern. In terms of existing products, the DCC seeks substitutes for the use of chemical substances of very high concern. When using chemical substances of very high concern is unavoidable, we have formulated clear management measures and operating procedures that clearly record the operation of chemical substances of very high concern and we carry out control on the usage.

Applications of Green Process and Green Products

2020 and Future Development

- Reduce harm to humans
- Reduce negative environmental impact
- Increase production process performance

CCDPJ's BDO and PTG Products Received the "Petroleum and Chemical Industry Green Products" certificate in 2020

DCCJS Received the "Petroleum and Chemical Industry Green Factory" certificate in 2020

Reduce harm to humans

At DCC, we insist on providing customers with the safest products that are also environmentally friendly. Through R&D and innovation, we constantly reduce substances (VOCs) harmful to humans. By doing this, customers will use our products with peace of mind, caring for human health.

Reduce VOCs



Low VOC vinyl acetate-ethylene copolymer emulsion (VAE emulsion)

In terms of water-based thermal insulation coating applications, water-based VAE emulsion serves as an interface adhesive for thermal insulation materials to largely reduce VOCs, avoid organic solvent toxicity and environmental issues. Water-based thermal insulation coating is widely being used in interior decoration building materials. In a bid to meet requirements of zero VOC, we use our self-developed new technology to enable VAE to possess anti-freeze property by maintaining good stability of the coating at low temperature (-5 °C) without adding anti-freeze agent, realizing goal of zero VOC.



Low VOC vinyl acetate-ethylene redispersible powder (VAE powder)

Develop VAE powder with low VOCs used in diatom mud decorative materials as it reduces VOC emissions by 60-80%, while also meeting the European VOC standard of less than 100ppm.

Reduce negative environmental impact

"Plastic restriction" has become a trend all over the world with many countries introducing a variety of types of plastic restriction policies, including Taiwan's restrictions imposed on disposable plastic straws. Therefore, we have put a lot of work into developing biodegradable plastics as a new generation of green materials that can degrade in the natural environment, thus friendly to the environment. In the meantime, "circular economy" is also an issue which we attach great importance to - we recycle various types of waste to reduce waste production, and by doing this, we extend the product values.

Improved properties of biodegradable materials

VAE powder - for biodegradable polylactic acid (PLA)

In terms of biodegrade material applications, PLA and VAE powder have good compatibility. PLA's disadvantages of hard and brittle properties can be improved using water-based and environmental friendly VAE powder so that it possesses flexibility and improve the impact strength. This product also adds wide applications while maintaining the original biodegradable properties. It has passed ISO 14855 biodegradable requirements ($\geq 90\%$), and can be used in packaging materials, foaming materials, and paper laminates.

1,4-Butanediol (BDO) - for decomposable plastic materials

BDO is the main raw material of polybutylene adipate terephthalate (PBAT). PBAT possesses biocompatible and biodegradable properties and can be used in the production of plastic bags, packaging materials and containers for daily necessities. BDO can also be used to produce polybutylene succinate (PBS), which also has biodegradable properties, and is currently being widely used in packaging, utensils, and tableware. With many countries in the world enforcing plastic restrictions, PBAT and PBS have become a new generation of green materials to increasingly replace the use of non-degradable plastics. Given that PBAT and PBS are easily decomposed by microorganisms in nature, they eventually degrade to carbon dioxide and water, helping reduce marine litter in the long run.

Recycling technology

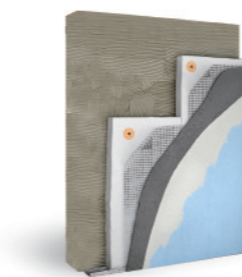
Gamma-Butyrolactone (GBL) - for lithium battery liquid electrolyte

Although GBL was regarded as process waste in the past, to respond to the requirements of circular economy, process waste reduction and the development of the power battery industry in recent years, the current design of process purifies GBL and sell it as a product for the synthesis of N-Methyl-2-pyrrolidone (NMP), the raw material for lithium battery electrolyte. The booming development of power battery manufacturing, the rise of new energy policy, transportation and power storage construction, and mobile communication industry will also help the energy storage battery market to grow.

Polytetramethylene ether glycol (PTG) - process waste solvents recycling

As DCC are dedicated to energy and resource conservation and reuse, waste acid generated in the PTG process is refined into sulfuric acid, on par with the concept of circular economy.

Applied energy saving products



VAE powder - used for the adhesion of building energy saving materials

VAE powder is used for thermal insulation material adhesion. By applying it on exterior walls, it effectively insulates the thermal insulation foam or thermal insulation tile and blocks the impact of outside temperatures to maintain a comfortable internal environment and reduces the use of air conditioning. As the latex film is formed and cured, the adhesion of the adhered body increases, allowing the polymer finishing mortar on the insulation foam material breakage rate reaching $\geq 90\%$, and can penetrate into the gap of the base layer. VAE is widely used in the construction industry as its water resistance can enhance the bonding strength of insulation materials and exterior walls to increase their service life.

Increase production process performance

We continue to make every effort in green process development through process integration and technological breakthroughs. By improving production capability and reducing energy consumption, we create a process environment that minimizes pollution.

Production capacity improvement; energy consumption reduction

DCCJS has conducted a full examination of all aspects of its production processes and process improvements. As a result, not only has production capacity of VAE emulsion increased by 11.6%, electricity and steam energy consumption was also reduced by 20.4% and 9.5%, respectively. The production capacity of VAE powder is expected to increase by 50%, with electricity and steam energy consumption reduced by 14.5% and 11.7%, respectively.

At DCC, we understand that there are limited natural resources, and under the impact of increasing stringent environmental regulations, we are focusing on developing products with high material efficiency and low energy consumption and emissions. For example, we enhance the thermal insulation of buildings and develop biodegradable plastic materials that degrade in the environment and are friendly to the nature. DCC constantly develop a variety of cost effective solutions to meet market demand environmental sustainability. These type of products generated revenues of approximately NT\$700 million in 2020.

1.2.2 Product quality management

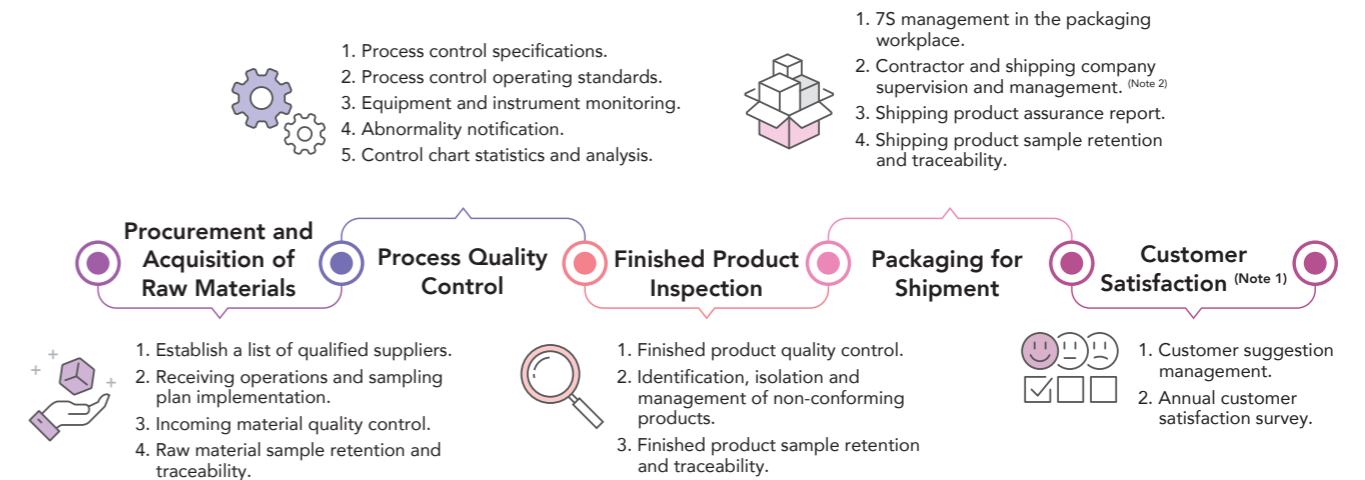
Management Approach for "Product Quality and Safety"

Meaning of Material Issues	▶	We pride ourselves on providing customers with satisfactory products and services, while at the same time growing with them and suppliers. We improve quality through hard work and innovation to ensure that all quality and safety of our products are in compliance with government regulations and product-related laws, as well as customer requirements.	
Responsibility	▶	Quality Assurance Department	
Policy and Commitment	▶	Adhering to the Company's policy, Make continuous improvement, Honor our commitments, Improve our quality, Satisfy our customers to provide them with top-notch products.	
Target	▶	Refine product quality and improve process capability	
		<div><div>Short-term</div><div><ul style="list-style-type: none">Integrate the Group's quality operational systemsStrengthen the quality of general knowledge training, with 150 employees expected to complete trainingIntroduce automated management systems</div></div> <div><div>Medium-term, Long-term</div><div><ul style="list-style-type: none">Create Customer-oriented Quality Needs and ExpectationsEnhance the statistical technology for manufacturing process control and quality managementFocus on quality change and product quality process improvementIntroduce automated analysis equipmentEstablish knowledge base</div></div>	
Action Plan	▶	<ul style="list-style-type: none">Led by the QA Division, alongside QA managers, Production Departments of all factories, as well as the Management Information Center promotes system standardization.Hire external teachers to improve the standard of the Company statistics.Create digital quality and statistics courses.	
2020 Implementation Result	▶	<ul style="list-style-type: none">Integrated and improved the quality systems in factories, including specification amendment system and concession receiving system.Trained 62 new ISO 9001:2015 internal auditors.Completed the non-conformity management audit in factories in Taiwan.Completed 1 session of education training for MSA & SPC control basic concept.Set up 3 courses including the quality and statistics, seven basic tools of quality, design of experiments digital courses.Organized 19 JMP discussion meetings, with 7 improvement topics.	
Communication/ Grievance Mechanism	▶	Communicate or file a grievance via customer hotline, DCC website - Contact Us, or email.	

Note: The management policy for product safety has been incorporated into the management policy for chemical management, please refer to 1.3.1 Chemical Management.

With our quality policy of "Make continuous improvement, Honor our commitments, Improve our quality, Satisfy our customers", DCC committee ourselves to providing customers with products and services that are of satisfactory. To ensure quality and stable supply, we implement stringent quality management and enhance process control. We have also established a supplier management system (please refer to 3.2. Sustainable Supply Chain Management) to promote sustainable development of the supply chain.

► Quality Management Process



Note 1: For customer satisfaction, please refer to 1.2.3 Customer Service.

Note 2: For contractor and shipping company supervision and management, please refer to 3.2.2 Supplier Management System.

Process Control Case Sharing

Through a stringent quality control system, the PTG process of Dafa Factory detects early abnormalities in production equipment in a timely manner. In 2020, there were four incidents of abnormal increases of ferrous iron concentration in process samples - the quality control system automatically alerted the relevant department, and an investigation was conducted. The cause was determined to be corrosion and damage on the reactor, which was satisfactorily dealt with within three days to avoid the expansion of damage, while minimizing losses. The repairing expense was estimated at approximately NT\$1 million.

As "quality" is an important issue for us and our customers, the Company QA Division conduct a thematic audit on an annual basis, and review quality-related issues and improvements on the execution of the management system with all factories on a monthly basis. In addition, through the monthly management meeting held in the factory and product marketing activities, we are able to thoroughly discuss quality improvement plans, development of new products, existing products and new specifications. We hope, by continuing to make improvements and innovate our development, we will enhance product quality and competitiveness, further increasing our customers' trust and satisfaction.

With DCC's complete traceability management mechanism, code or batch number management tracking is used from raw materials entering the factory, semi-finished products in the manufacturing process, to product shipment. Any stage of an abnormality can be immediately traced upward to control the complete raw material input and output process. The mechanism improves the efficiency of abnormality handling by its real-time control, achieving the propose of strict and comprehensive product quality control.

◆ Strengthen Quality Education

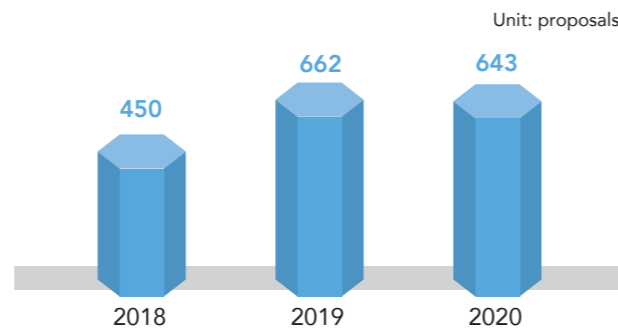
In order to deepen DCC's quality culture, we continue to strengthen employees' professional competence in quality, and have planned various digital courses for employees.

2020		2021
Physical Courses	Digital Courses	Digital Courses
Statistical Process Control (SPC)	Basic Statistical Analysis	Statistical Process Control (SPC)
Measurement System Analysis (MSA)	Seven Basic Tools of Quality	Measurement System Analysis (MSA)
	Design of Experiments	8D Report
		6 Sigma

◆ In-depth Quality Events

We value the creativity of our employees and inspire their motive for quality improvement to prevent the occurrence of possible abnormality while also optimizing the method of operation. In addition, we do not limit our employees to just quality control. Our employees are also encouraged to propose improvement plans from different perspectives associated with industrial safety, environmental protection and engineering technology. By taking this approach, DCC create a safe working environment which allows the growth of the Company and employee, contributing to the Group's sustainable development.

DCC's 2018-2020 Number of Improvement Plans Proposed



◆ Product Certification

DCC has a total of 15 products, and all of which have attained the quality management system certification (ISO 9001:2015), pursuing high quality products and services. Also, as we attach great importance on the list of substances of very high concern (SVHC) under the EU REACH regulations and the restriction of hazardous substances in electrical and electronic equipment under RoHS, we perform testing on all related products. Furthermore, in order to expand our business to meet our customers' needs, all of our products meet the regulations required in the food container, cosmetics, and cigarette adhesive industries.

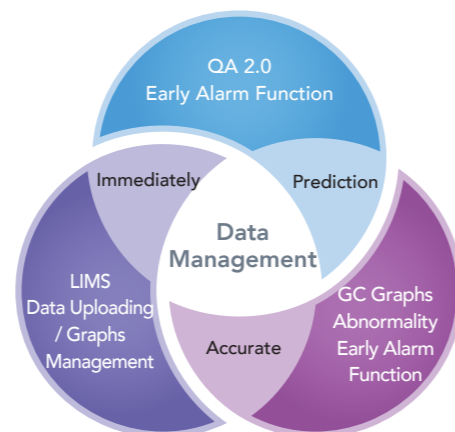


◆ Quality System Audit

We review the Group's quality management system's implementation effectiveness through thematic and ad hoc internal and external audits (held at least once a year in each factory), as well as occasional audits performed by customers. Through Plan-Do-Check-Act (PDCA), we review ourselves and continue to make improvement in order to refine our quality system. At the same time, we strengthen operating procedures via mutual exchanges and sharing of quality management experiences with those holding the same positions in the factory. In addition, we arrange a supplier audit on a regular basis to confirm that our supplies are in compliance with the requirements of DCC's product management and to maintain the supply, quality and service of raw materials.

Optimize the Inspection Data Management Mechanism

In 2020, Dafa Factory introduced the "Laboratory Information Management System (LIMS)", and the Management Information Center developed a product inspection system with the process deviation monitoring early alarm function and a gas chromatography chromatogram monitoring and early warning system. With the three operations fully automated, it poses benefits to DCC to build a big data database with statistical value, simultaneously improving the data management capability of the laboratory and the capability of process management. The LIMS is expected to be fully introduced in all factories in Taiwan by 2022.



1.2.3 Customer Service

Management Approach for Customer Relationship Management

The Significance of Topics to DCC	Customer First has always been DCC's management philosophy. We strive for providing inclusive customer service and increase customers' satisfaction.
Responsibility	Business & Marketing, R&D, QA, and Production Divisions work together to solve customer issues.
Policy and Commitment	DCC are committed to providing customers with high quality and highly competitive products, as well as becoming a partner that they can rely on and grow together.
Target	<p>Improve customer satisfaction while continuously tracking progress and results.</p> <div> <div>Short-term</div> <div>Medium-term</div> <div>Long-term</div> </div> <p>Increase customer satisfaction, strengthen customer satisfaction regarding use convenience, and improve the questionnaire platform.</p> <p>Maintain customer satisfaction level above the standard and increase customer loyalty.</p> <p>Maintain customer satisfaction level above standard and increase customer loyalty.</p>
Action Plan	<ul style="list-style-type: none"> Establish a customer relationship management (CRM) system Incorporate customer suggestions into the regular meeting for review Gather the Marketing & Sales, R&D, QA and Production Divisions to work with external partners to jointly solve customer issues.
2020 Implementation Result	<ul style="list-style-type: none"> Customer satisfaction survey: 12 products; average satisfaction rate: 4.68 points. In 2020, there were no incidents of breaches of customer privacy or losses of customer data.
Communication/ Grievance Mechanism	Collect customer comments through customer visits, emails, DCC website - Contact Us and customer hotlines.

◆ Good Customer Communication

At DCC, we value customer-oriented quality management and customer relationship management. We maintain sound communication with customers via regular customer visits, customer satisfaction surveys and customer feedback forms and the CRM system. From customers' feedback, we make corrections or development aiming to reduce the defect rate and grievance rate. We also plan improvement measures by putting ourselves in the customer's shoes and find the root cause of the complaint through working with Business & Marketing, R&D, QA Divisions, creating a win-win situation for DCC and customers and maximizing social values.

Through our official website, DCC provide customers with a platform to exchange views, information and price inquiry. At the same time, we also respond to our customers regarding any questions and opinions through the platform DCC posts its latest information on the official website so that customers can get hold of our important information at any time.

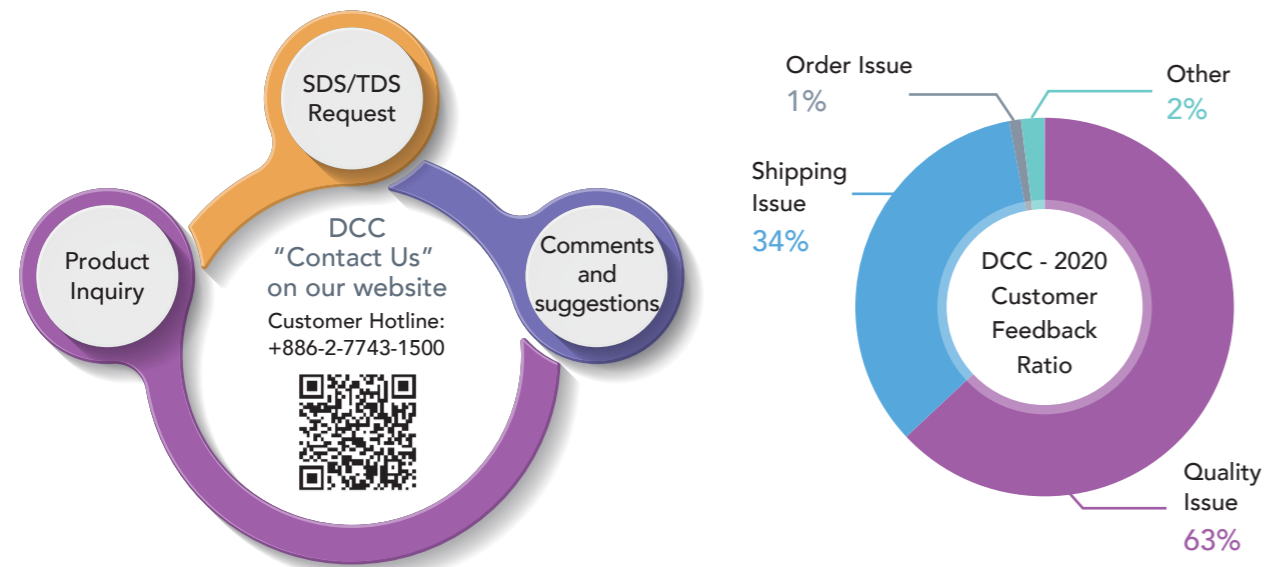
◆ Product Information Disclosure

Based on the industry and product category, the Company's official website provides customers with clear and detailed product information. Customers may inquire information on the Group's products regarding their characteristics and applications. Electronic Catalogs and related certificates are also available on the website for download. Customers may submit a request or feedback through our website where they wish to obtain further product specifications or material safety data sheet, or have any questions related to our products. Queries will be answered by our responsible unit.

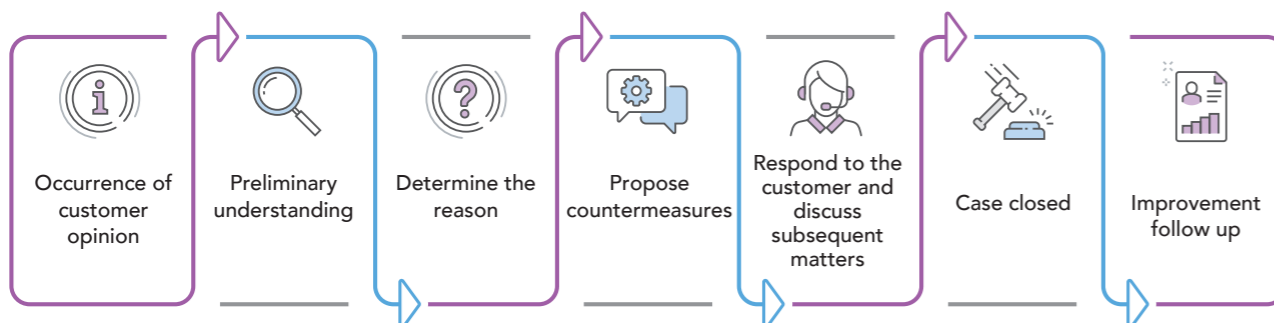


◆ Customer Opinion Processing

With the intention to collect customers' valuable feedback, at DCC, we have established clear procedures for customer grievance channels, returns/exchanges, and compensation applications. We collect customer comments through customer visits, emails, DCC website - Contact Us and customer hotlines. To fully record the reason and the process of their feedback, relevant comments are logged into the customer feedback system. The manager assigns the matter to the relevant unit, who will conduct an investigation and analysis, and the customer will be responded accordingly with proposals of appropriate improvement plans as soon as possible. After the matter is solved, we will propose corrective measures to avoid recurrence through the statistical data of the customer feedback system.



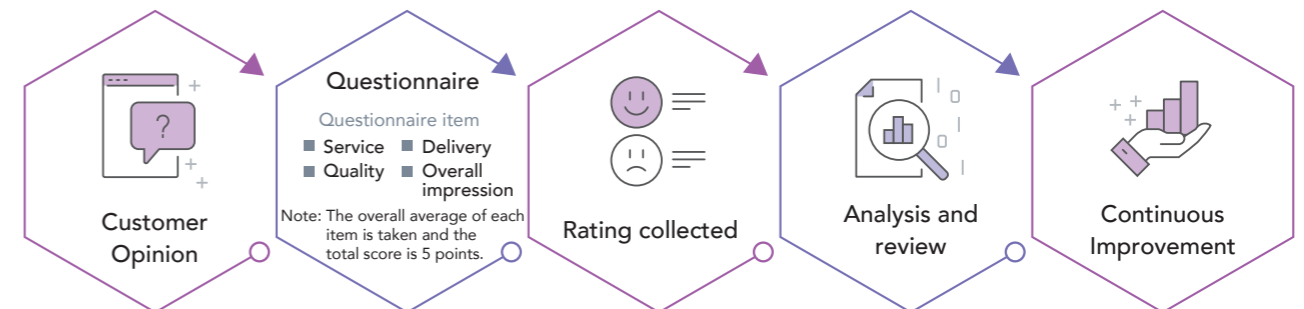
► Customer Opinion Processing Procedures



◆ Customer Satisfaction Survey

As DCC holds customers' comments in high regard, we perform a customer satisfaction survey on an annual basis. The subjects of the surveys are the top 10 customers in terms of sales volume or customers who have made a complaint in the previous year with four core topics: service, quality, delivery and overall impression. Through the results, we will review whether our products and services are up to customer standard, and make continuous improvement. We aspire to satisfy our customers by collecting their feedback, and thus maintaining a good relationship and communication channel with them.

► Customer satisfaction survey model



There are 12 products on DCC's customer satisfaction survey DCC have strict control when it comes to customer information. For the 2020 results, please refer to the Management Policy of Customer Relationship Management. In 2020, there were no incidents of breaches of customer privacy or losses of customer data. For related methods, please refer to 3.1.3 Risk Management.

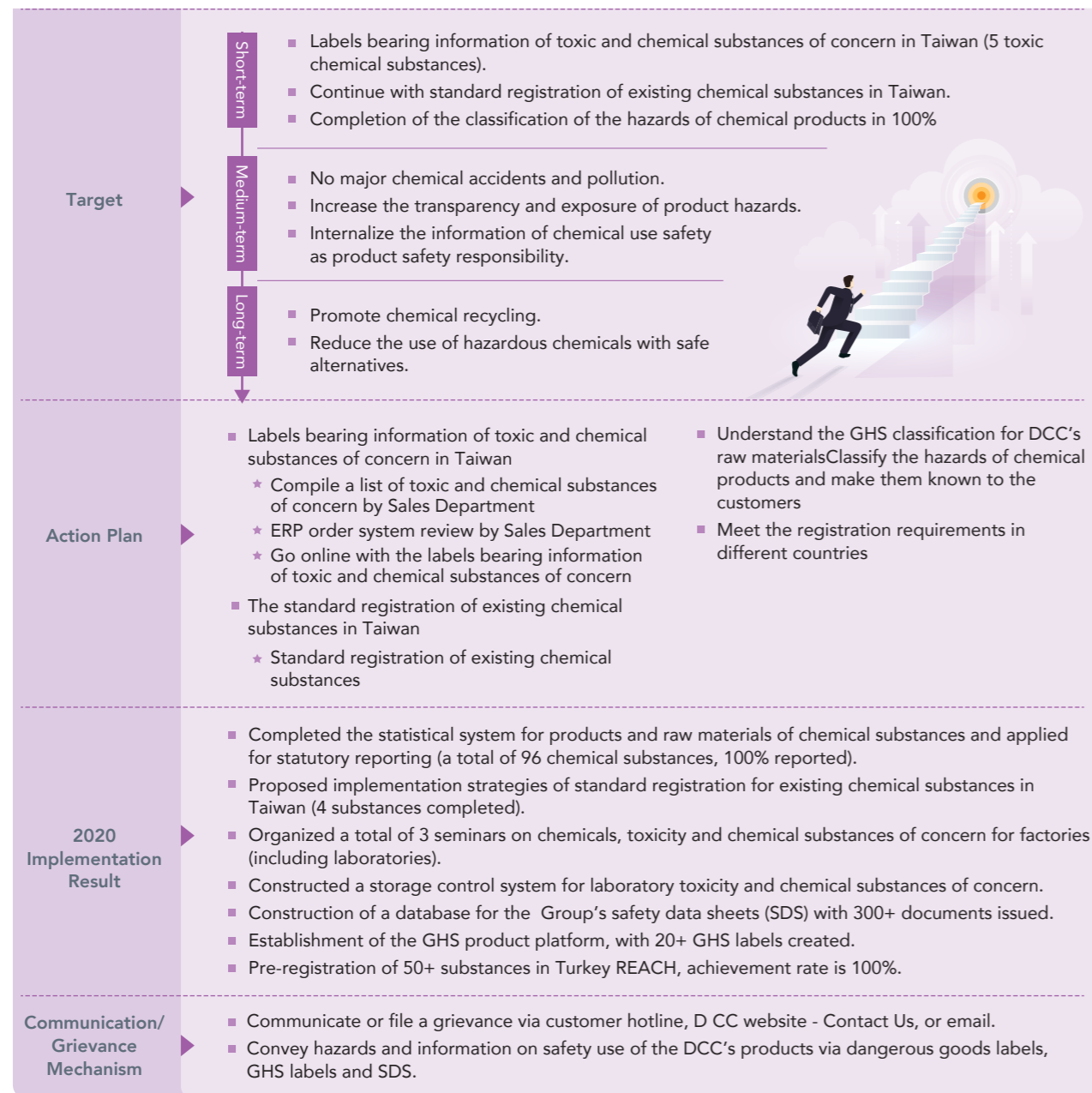
1.3 Occupational Health and Safety

Providing a healthy, safe and environmentally friendly workplace is the duty-bound responsibility and obligation of operators and employees of DCC. At DCC, we take workplace safety maintenance seriously and proactively inject the spirit of responsible chemistry into the Company. Through a sound chemical management system, we ensure the safety of our employees and customers. At the same time, we also assist our contractors in raising workplace safety awareness. Furthermore, through enforcing environmental issues, health and safety and promoting process safety management (PSM), we continue to make improvements to achieve the goal of zero accidents. Furthermore, we hope to expand the overall product lifecycle and incorporate it into DCC's responsible care system.

1.3.1 Chemical management

Management Policy for "Chemical Management"

Meaning of Material Issues	<ul style="list-style-type: none"> DCC takes a responsible attitude on the subject of R&D, raw material acquisition, production, use and disposal stages of chemicals. We seek safe alternatives and reductions when using high-risk/hazardous substances to reduce any negative impact on human health and the environment. With respect to production management, we create a safe and secure working environment to reduce the potential hazards to labor production.
Responsibility	Product Standards Department, CCPG HSE Division
Policy and Commitment	<ul style="list-style-type: none"> To reduce the harm caused by hazardous chemicals to the human body and the number of deaths and illness caused by air, water, and soil pollution by 2030. Professional knowledge will be utilized to maximize the benefits of chemicals to people and the environment. We will do our utmost to reduce the negative impact chemicals pose on human health and the environment.

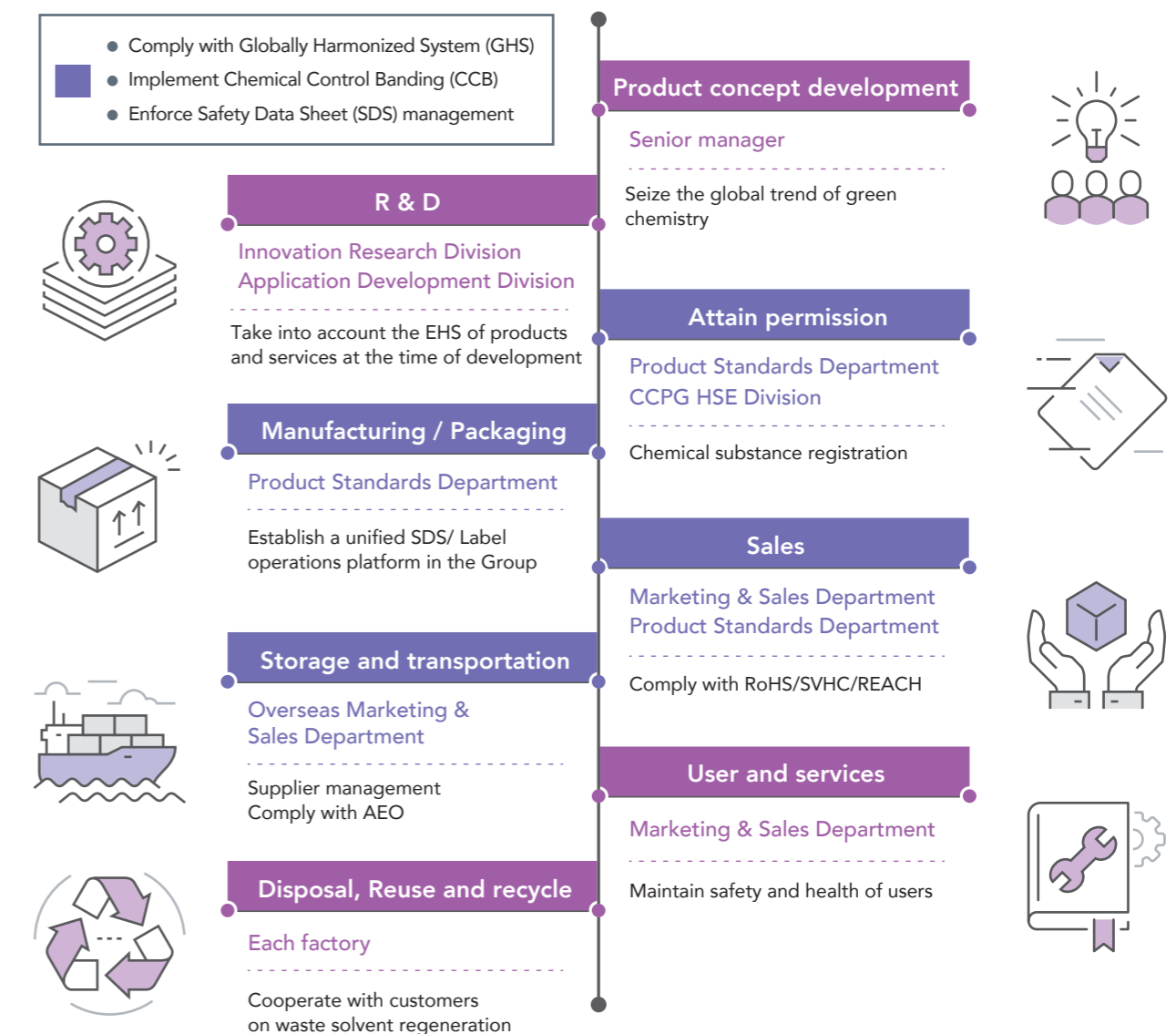


When it comes to chemical management, DCC's top priority is to comply with laws and regulations, particularly product compliance. By doing so, we will meet the requirements and confidence of customers in our products. The Company has established a dedicated department to oversee the regulations of chemicals at the production locations, while understanding the regulations at the location where products are intended to be sold to ensure the legal compliance of products to protect our customers' rights. The Company's related companies have access to personnel assistance via the IT system, telephone or in person, to obtain product compliance in real-time.

To achieve the Strategic Approach to International Chemicals Management (SAICM), and reach the goal of sustainable development in 2020, the negative impact posed on the environment and human health during the manufacturing and use of chemicals must be reduced. Moreover, countries all over the world have been enforcing the registration of chemicals, requiring manufacturers to provide chemical safety information, making comprehensive management of chemicals become a necessary condition for achieving sustainable development. In 2020, the Group has continued to set itself a target to participate in chemical registration in different countries, and to understand the hazards of the Company's products through the completion of registration and substance exposure evaluation. The information regarding hazardous products is conveyed to our downstream customers by the SDS and GHS labels, enabling downstream customers to grasp the safety information on the use of products, while allowing them to take appropriate preventive and handling measures.

◆ Internal Management Process of Chemicals

We have established a sound chemical management system from products to raw material inventory. We complete chemical safety evaluations through a pre-registration evaluation, chemical substance identification, and establishment of a registered substance data. So far, we have completed dozens of chemical registrations in the EU and Taiwan. There are also a number of chemicals registered in Korea or pending the completion of regulatory obligations, providing customers with product compliance protection. We keep a close eye on international standards and the customer's corresponding management list. In terms of substances of very high concern - not only do we conduct management system inventory twice a year, we have also added an audit mechanism to get hold of the safe use and product residue status at the time of issuing of the raw material SDS or producing of the product SDS. Furthermore, we make suggestions for alternatives internally in accordance with the international control trends to reduce possible hazards substances of very high concern may pose on the human health and the environment. At the initial stage of R&D of new products, we carry out assessments of the impact posed on the environment. At the same time, we reduce the use of chemical substances of very high concern, including the life cycle of products and processes, and we try our utmost to use raw materials and processes that pose less impact on the environment and humans. In terms of existing products, we continue to research and develop alternatives for the use of chemical substances of very high concern. Meanwhile, we strive to meet the EU requirements to conduct investigations and provide our customers with the distribution situation of chemical substances of very high concern.



The dedicated department continues to promote chemical regulations in each factory yearly, while updating the chemical operation list and substance information. Moreover it also continues to expand the function of the system, combined with procurement, finished products and inventory system to make up for missing chemical information of finished products and raw materials. In addition, a toxic chemical substance documentation management platform has also been established to control the legality of import and export of toxic chemical substances.

◆ Establishment of Mechanism for Chemical Substances of Concern

Amended and published in 2019, the “Toxic and Chemical Substances of Concern Control Act” has included the control of chemical substances of concern. The Company is also in the progress of establishing a management mechanism for chemical substances of concern, including tracking the list of chemicals announced, while combining the chemical database to compare with the real-time chemical operation list of each factory, effectively managing the announced chemical substances of concern in batches. Through entering the CAS No. on the procurement system of the chemical upon purchasing, it allows the system to determine whether the chemical is a substance of concern, and gives a warning message. The subsequent plan is to regulate the sales labelled with toxic chemical substances of concern (expected to be completed in 2021), to ensure that the DCC’s sales end meets the qualifications to sell toxic chemical substances of concern. We ensure regulatory compliance through the dual control of the procurement end and sale end mentioned above.

◆ 2020 Results of Chemical Registration/Verification

In 2019, DCC pre-registered over 200 substances with Korea’s ARECs, while 2 substances were registered in Taiwan. By making this effort, we ensure our products and the supply chain meet the requirements of chemical management laws of other countries. At the same time, we also provide aid to customers in applying for the addition of existing chemical substances to the Russian chemical substance inventory list. In accordance with the planned schedule, we pre-registered over 50 substances with Turkey REACH (KKDIK) by the end of 2020, with a 100% achievement rate. We are in the process of preparing to register with UK-REACH and India BIS Certification.

◆ Rolling Correction of Toxic Chemical Document Management Platform

The toxic and chemical permit management platform is a web-based management platform developed by DCC, and has achieved good results since it first went live in 2018. Each factory can upload toxic chemical documents (including permits, registration documents and approval documents) on the management platform to effectively manage toxic chemical substances. This year, the government’s management policy to promote having multiple substances on one certificate (60 certificates of toxic chemical substances have been condensed to 9 certificates) enables the integration of validity of the same toxic chemical substances of our factories. At the same time, it has lifted the burden of administrative cost and manpower having to extend the certificate, reaching the purpose of effective management. Also, our management platform will be amended in a rolling collection manner to meet the spirit of regulatory compliance.

◆ Optimization of Chemical Regulation Database

We continue to optimize the “chemical regulations operations” in the ERP system. This year, we have incorporated the list of regulations governing hazardous goods during shipping, to alert the procurement colleagues in advance during operation, apply for relevant shipping forms and inform the shipping company. The database for finished chemical substances was completed, and information regarding manufacturing and input volume of chemicals is available on the system, meeting the requirements of all laws and regulations. In order to get hold of the composition and hazards of raw materials used by the Company, we have developed a raw material SDS database this year to centralize the management of raw material SDS, which were issued internally to enhance the effectiveness of the raw material use. As for the ongoing inconsistent hazard labeling, this year, we have completed the GHS labeling platform, to professionally produce and issue single-interfaced content to reduce shipping labeling errors.

◆ Employee Occupational Safety Management

We arrange chemical management education and training each year to assess possible exposure risk among manufacturing workers, and eliminate those possible risks by means of substitution, isolation, engineering controls and personal protective equipment. As required by law, we manage the risk of hazards by classifying them into levels, and compile the items for reporting. The chemical management mechanism mentioned above strives for “zero hazards” on employees. We also entrust a qualified company to perform operating environment monitoring more than twice each year to protect the health and safety of our employees. For more details, please refer to 4.3.2 Healthy Workplace.

◆ Product Safety and Customer Service

With the rapid change of international chemical management regulations, customers may request the desire to get to know the laws and regulations from time to time. In view of the increasingly stringent global regulations on hazardous substances, not only are we equipped with general analytical equipment, we also have ICP-OEX, ICP-MS, GC/MS, LC/MS analytical equipment. Depending on needs, we also entrust third-party laboratories to perform testing on the hazardous substances in our products. We also have a stringent management mechanism in place for chemical shipping. For more details, please refer to 3.2.2 Supplier Management System.

In addition to banned chemicals, a small number of DCC’s products are listed or have been proposed to be listed as psychotropic substances in certain countries. In an attempt to demonstrate and fulfill our CSR, we, alongside our peers in the industry and industry associations, have begun to adopt global autonomous management to prevent the spread of illegal use of substances. We have implemented effective management from production control in the factory to investigations on the use of the end customer. For the past few years, we have also been working with the Taiwan Responsible Care Association and members of the industry to review the implementation plans for market supervision and operations of the European Chemical Industry Council.

DCC are fully committed to implementing the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), reducing harm caused by chemicals to humans and the environment. Moreover, we have become aware of the development of related policies, and have designated a department to oversee the planning and implementation in relation to the Company’s GHS procedures and operations. These matters include the classification of GHS hazards for all products (so as to get hold of the use of Category 1 and 2 health and environmental hazardous substances), standardization of safety data sheet (SDS), labeling compilation, compliance promotion, and regional emergency consultation telephone lines. We organize general education and training on hazards in the factory area in accordance with laws and regulations. The SDS and hazard labels provided to customers, or available in the operational site are completed through the reliable data combined with classification of logics, supplemented by systematic control and effective deadlines. In accordance with the global operation strategy, the SDS is provided in the customer’s native language and in line with their domestic laws and regulations; it is also used as the basic measures for the sale of products, thoroughly conveying the information of product safety to customers. In 2020, nearly 700 SDSs were produced and issued.

1.3.2 Workplace Safety and Process Safety

As a means to establish a safe workplace, we continue to protect and improve the safety and health of our employees. At DCC, we have established an occupational health and safety management policy and set annual occupational safety goals. Our Taipei company and all factories have passed the OHSAS 18001 Occupational Health and Safety Management System certification and began the conversion of ISO 45001:2018 Occupational Health and Safety Management in 2019 including procedure conversion, education and training, and internal and external audits. In 2020, we have completed the certification conversion.

Management Approach for “Occupational Safety and Health”

Meaning of Material Issues	Through the effective promotion and implementation of health and safety, we strive for a working environment that enables employees to work with peace of mind, further shaping a sustainable enterprise.
Responsibility	Taipei Head Office: CCPG HSE Division; All Factories: Safety & Health Department
Policy and Commitment	The effectiveness of commitment by top-level management to safety and health as a reflection of the investment of policy and resources.
Target	<p>Build a safe workplace that has zero disasters and zero occupational accidents.</p> <p>Short-term</p> <ul style="list-style-type: none"> Safety: Adopt a strategy that emphasizes both process safety and occupational safety and implement it in all levels and factories. Health: Combine the operating environment as the main axis and the health management system as a tool to build a line of defense for health. <p>Medium-term</p> <ul style="list-style-type: none"> Safety: Combined with the process safety junior engineering system to refine process safety; expand participation and establish monitoring safety performance through a variety of KPIs. Health: Effectively improve harmful factors in the factory through digitized management in operations to prevent the possibility of human contact. <p>Long-term</p> <ul style="list-style-type: none"> Safety: Establish a high safety culture and promote preventive management driven by leading indicators that eliminate the possibility of accidents at an early stage. Accumulate experience and investment, and construct a working environment with no occupational accidents. Health: Link the environmental monitoring cloud with the health inspection cloud and eliminate the possibility of work-related ill health with the effective management of the chemical substance cloud.

Action Plan	<ul style="list-style-type: none"> ■ Externally <ul style="list-style-type: none"> ★ Industry-academic cooperation: Over NT\$10 million per year is invested in safety, while NT\$4 million is invested in health. ★ Take part in various PSM training. ■ Internally <ul style="list-style-type: none"> ★ All factories must implement a dedicated process safety junior engineering system with dedicated personnel to protect process safety. ★ All employees are to take the occupational safety culture tour courses to reduce occupational hazards. ★ Deepen PSM process safety hazard evaluation.
2020 Implementation Result	<ul style="list-style-type: none"> ■ Safety <ul style="list-style-type: none"> ★ Full implementation of the occupational safety culture tour courses to strengthen the safety culture. ★ Introduce failure cases and non-routine operations of process hazard analysis (PHA) evaluation. ★ Storage tank risk analysis and evaluation. ★ All-employee implementation of the SDS for chemical substance hazards. ★ Continue to promote the process safety manual and simulation exercises to implement safety production. ■ Health <ul style="list-style-type: none"> ★ Monitoring of the operating environment of all factories is carried out in accordance with the operating and tender acceptance measures.
Communication/ Grievance Mechanism	Any environment, safety or health issues or injustice encountered in the factory may be reported to the safety and factory health manager. If it involves a wider issue, a grievance case may be filed at the CCPG HSE Division to ensure an effective resolution.

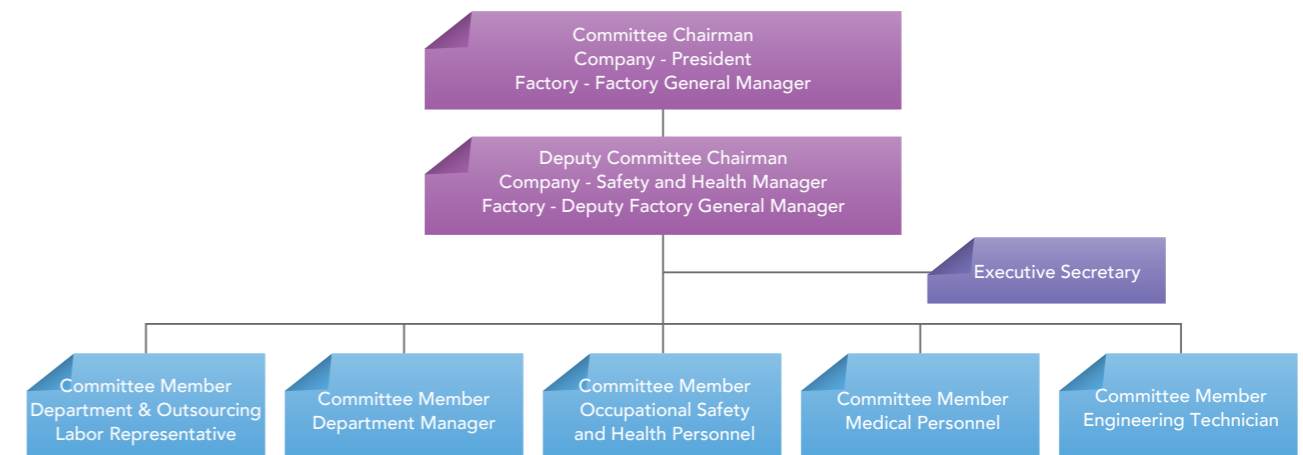
◆ Promotion of Occupational Safety and Health Committee

Owing to the dedication of occupational safety, DCC promotes the safety culture and system on a periodic basis through different levels of committees and meetings, as well as employee involvement. By allowing the safety policy to be implemented in the work of each employee, we can optimize the safety system via the feedback of employees. We have formulated and enforced the "Occupational Safety and Health Committee Implementation Measures" and have set up an Occupational Safety and Health Committee within the Group and factories. The Committee consists of both employers and employees. The President or factory general manager serve as the chairman of the Committee. The Committee aims to handle the proposal, coordination and supervision of environmental, safety and health-related matters in the factory. Each quarter, we convene an Occupational Safety and Health Committee meeting to implement employee consultation and employee involvement, and the following topics were discussed in order:

<ul style="list-style-type: none"> ☑ Suggestions for the occupational health and safety policy ☑ Coordinate and recommend occupational safety and health management plans ☑ Safety and health education and training implementation plan ☑ Operating environment monitoring, results and measures taken ☑ Health management, work-related ill health prevention and health promotion matters ☑ Safety and health proposals 	<ul style="list-style-type: none"> ☑ Matters associated with automatic inspection and safety and health audits ☑ Preventive measures for hazards from machinery, equipment, or raw materials and materials ☑ Occupational disaster investigation report ☑ Review of safety and health management performance ☑ Safety and health management of contracting operations ☑ Other matters associated with occupational safety and health management
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As the pandemic badly affected the world in 2020, the Occupational Safety and Health Committee initiated the tiered management and pandemic prevention measures for our employees to follow to ensure their safety and health. We have also been making timely reviews and amendments on our pandemic prevention policy according to the information released by the Taiwan Centers for Disease Control (TCDC).

► Organizational Chart of DCC's Occupational Safety and Health



◆ Work Injury Statistics

In 2020, DCC had a total of 12 work injuries/accidents (including off-site traffic accidents), all of which have been included in the management references as a basis for optimization and improvement. The main injuries that occurred in the factory are: falls, cuts from machinery operations, burns and chemical spills. On the other hand, the number of accidents outside the factory were slightly higher.

Regarding work injuries inside the factory, in order to prevent personnel from being injured due to careless operation of machinery and equipment, we enforce SOP education and training, and ask workers to make sure that they wear PPE properly. Furthermore, we have re-examined the Job Safety Analysis (JSA) on all operations and formulated optimal risk reduction measures, such as modifying SOP, operational equipment and switching to safer tools and PPE, in order to prevent similar accidents from recurring.

► 2020 Indicators for Work Injuries

項 目	2020		
	Male	Female	Total
Number of fatalities as a result of work-related injuries	0	0	0
Number of high-consequence work-related injuries	1	0	1
Number of recordable work-related injuries	12	0	12
Rate of fatalities as a result of work-related injuries	0.00	0.00	0.00
Rate of high-consequence work-related injuries	0.07	0.00	0.06
Rate of recordable work-related injuries	0.80	0.00	0.71
Total number of hours worked	3,000,838	401,786	3,402,624

Note 1: There were no work-related ill health incidents in DCC in 2020.

Note 2: Rate of fatalities as a result of an work-related injury = Number of fatalities as a result of work-related injury / Total number of hours worked × 200,000 *.

Note 3: Rate of high-consequence work-related injuries (excluding fatalities) = Number of high-consequence work-related injuries (excluding fatalities) / Total number of hours worked × 200,000 *.

Note 4: High-consequence work-related injuries are defined as an injury that results in death, or in the worker's inability to recover to the pre-injury state of health within six months due to occupational injury.

Note 5: Rate of recordable work-related injuries = Number of recordable work-related injuries / Total number of hours worked × 200,000 *.

Note 6: Recordable work-related injuries are defined as the Occupational Accident Statistics reported monthly to the Occupational Safety and Health Administration, Ministry of Labor.

Note 7: For detailed information on each factory for 2020, please refer to Appendix A.

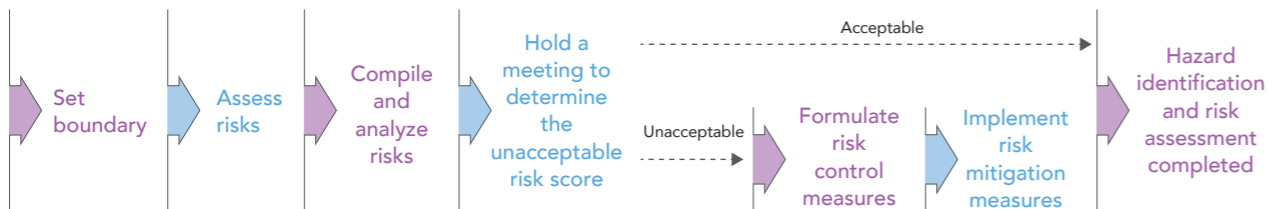
* : Refers to the rate per 100 employees for 50 weeks per year with 40 working hours per week.



◆ Occupational Accident Prevention and Handling

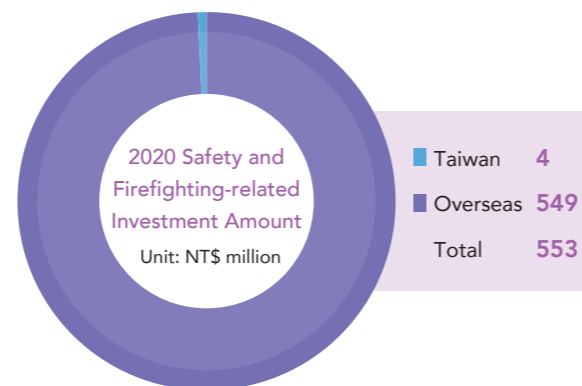
We use statistics to analyze the cause of incidents and investigation outcomes, and propose prevention plans at the occupational safety meetings. Once this has been done, countermeasures and related improvements are proposed, potential hazards identified and controlled in advance through safety and health hazard identification and risk assessment measures to protect the safety and health of our employees.

► Safety and Health Hazard Identification and Risk Assessment Operating Procedures



DCC is committed to protecting the safety of all employees. Aside from providing PPE and management of related procedures, we continue to invest in adding and improving related safety and firefighting equipment each year. In 2020, we invested a total amount of NT\$553 million and by doing this, we hope to reduce the possibility of accidents, while improving the ability to respond in the event of an accident, further reducing injuries caused by accidents.

An accident within the Company or false alarm that does not constitute an occupational accident will be handled in accordance with the accident handling and investigation management measures, creating a safe workplace culture in the Company. Information on CCPS Beacon, Lloyd's Register, and Marsh Risk Engineering Position Paper is shared on the Environmental Safety and Health Notice Board.

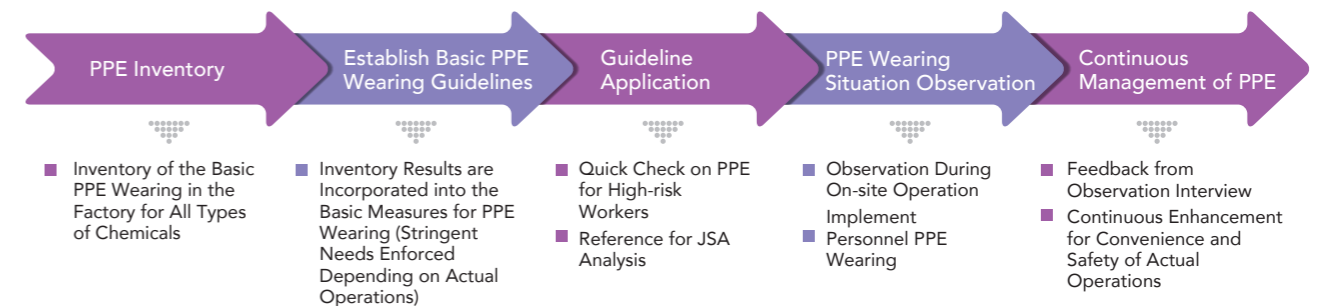


► Accident Handling and Investigation Management Measures



With the ongoing spattering incidents in chemical factory, accident reviews are particularly important. In a bid to reduce injuries caused by spattering, a comprehensive review was conducted in 2020 targeting the safety of personnel. The following improvement measures were formulated focusing on the operations where spattering is more likely to take place:

1. An inventory was performed on PPE worn at each production process in the factory and its suitability evaluated to formulate basic PPE wearing guidelines (303 operations in all production processes).
2. According to basic PPE guidelines, PPE worn on the working site will be observed on a weekly basis and safety and health personnel will perform inspection from time to time. From observations, non-compliance or out-of-date procedures can be discovered, enabling us to continue to optimize operating procedures, improving the convenience and safety of the execution of operations.
3. Through accident analysis, it was found that equipment inspection, dismantling and cleaning or other non-routine operations are prone for personnel to suffer from spatter injuries. The primary reason is due to inadequate pre-operational assessment and lack of PPE. Given this, aside from existing job safety analysis (JSA), we manage non-routine operations including equipment and pipeline inspection, dismantling and cleaning by combining the high-risk work permit method to improve operational safety.



Dafa Factory - Promotion of Evaluation Program for Complete PPE Wearing

Aiming to improve the entirety and accuracy of PPE worn by responders in the factory, Dafa Factory has initiated the Evaluation Program for Complete PPE Wearing. The teaching system was set up and seed instructors from different departments arrange training plans and activities, which are evaluated by the Safety and Health Department. In 2020, 50 employees in the factories passed the evaluation (passed > 90 points). According to the evaluation outcome, the excellent instructors and trainees (top 3 in evaluation scores) were praised and given bonuses as encouragement.



Promotion of Evaluation Program for Appropriate Wearing of PPE



Employees with remarkable performance are awarded by the factory general manager

◆ Traffic Accident Prevention

In 2020, DCC had a total of 4 traffic accidents, all of which have been incorporated in the management references as a basis for optimization and improvement. In terms of traffic accidents, the accident review and improvement is conducted from three aspects - people, cars and roads. For roads: re-examine the traffic situation on the roads where accidents take place and remind employees to pay extra attention on those roads; for vehicles: promote the notion of regular inspections of vehicles to ensure tire patterns and tire pressures are normal, while encouraging employees to share cars or take company bus instead of riding a motorcycle, or ride a motorcycle equipped with ABS anti-lock system. Other than strengthening the promotion of traffic accident cases through safety and health meetings in each department and electronic media, we also hire lecturers from the traffic police department to perform education and training on employees, aiming to raise the awareness of employees regarding defensive driving to and from work. Through these three major aspects, we hope to reduce the occurrence of traffic accidents.



Traffic Police Department Performing Education and Training

◆ Contractor Safety Management

In order to protect and reduce the safety and health risks of operations, services and activities within the Company, prior to the delivery of contracted operations, we will convene a consultative organization meeting to formulate the contractor's environmental, safety and health management procedures as required by law. At the meeting, we discuss and communicate with contractors and inform them of the working environment and the hazards of operations, such as fire, elevated operations, moving operations that promote repeated musculoskeletal disorders. Contractors and employers are urged to provide a health examination and health management measures to their workers based on the operational risks. At DCC, we also plan safety and health education courses to promote safety awareness to the workers hired by our contractors. For details, please refer to 3.2.2 Supplier Management System. In 2018, we introduced automated mechanical packaging machines in packaging working area that pose high-risk musculoskeletal hazards to prevent musculoskeletal injuries to contractors.

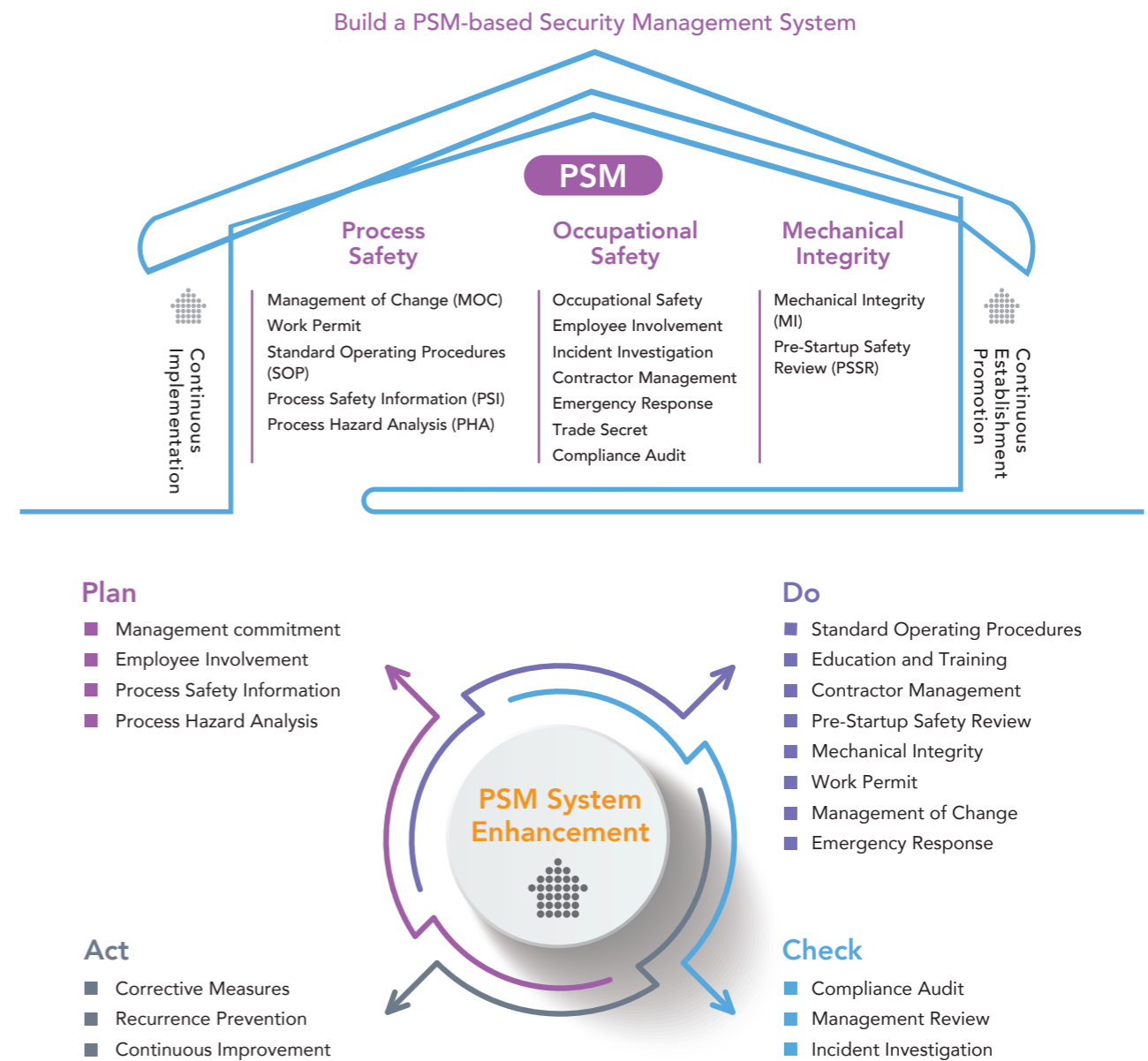
As for the safety and health performance of contractors within the factory, DCC encourage contractors to enhance their own safety management to promote a positive cycle by giving incentives to contractors with excellent safety and health performance in accordance with the "Contractors Occupational Safety Management Reward Measures" formulated by CCPG. Contractors are rated based on five aspects: meeting involvement, number of work accidents, number of violations, document review, and site management. A comprehensive evaluation is conducted every six months and contractors with excellent performance are recognized. In 2020, the Group selected 54 excellent manufacturers with rewards totaling over NT\$1.2 million. By giving recognition to the performance of manufacturers, we hope they are positively encouraged. The Group also guides contractors to improve their safety management with both means of rewards and fines, prompting a virtuous competition cycle. In the future, the implementation data will be collected for the continuous optimization of operating procedures, enabling the evaluation system to be more inclusive.



Excellent Contractors Awarded

◆ Process Safety Management (PSM)

Our Process Safety Management (PSM) platform was developed based on 14 management elements of three major frameworks: occupational safety, process safety, and mechanical integrity. The overall PSM performance indicators, PSM audits, PSM management meetings, and related PSM technologies from each factory are incorporated into management. The safety protection net is built and improved with the commitment of top-level management and involvement of all employees, combined with various elements of PSM to allow Plan-Do-Check-Act (PDCA) process to continue to refine.



◆ Construct Process Safety Performance Indicators

Through monitoring and measurement of process safety performance indicators, the performance in DCC's process safety management (PSM) can be traced. In 2020, a total of 8 process safety incidents occurred, and among them, 6 resulted in injuries. The head office also carried out parallel investigations while facilitating improvements in each factory. According to the accident triangle theory, there are 300 false alarms behind every major incident. At DCC, we set up an accident investigation team to carry out a due diligence investigation on each process safety incident and false alarm. We also ask related departments to check and improve each deficiency, and hope to reduce the occurrence of false alarms to further reduce possible major accidents through proactive means.

► 2020 Process Safety Metrics

Tier 1 Number of Process Safety Events (PSE 1)	Tier 2 Number of Process Safety Events (PSE 2)	Tier 1 Process Safety Event Rate (PSER) (PSE1R)	Tier 2 Process Safety Event Rate (PSER) (PSE2R)	Tier 1 Process Safety Event Severity Rate (PSE1SR)	Number of Process Safety Alarms
3	5	0.18	0.30	0.30	85

Note 1: The abbreviation here is CCPS (Center for Chemical Process Safety), which differs from SASB but has the same definition (PSE, PSE1R, PSE1SR are called PSIC, PSTIR, PSISR in SASB).

Note 2: Process safety event rate (PSE1R) = Annual number of Tier 1 process safety events × 200,000* / Total number of hours worked by workers (all employees and contractors).

Note 3: Process safety event rate (PSE2R) = Annual number of Tier 2 process safety events × 200,000* / Total number of hours worked by workers (all employees and contractors).

Note 4: Process safety event severity rate (PSE1SR) = Annual total score of Tier 1 process safety event severity × 200,000* / Total number of hours worked by workers (all employees and contractors) (the total score of annual process safety event severity is a classification of the number of process safety events through the process safety incident severity level).

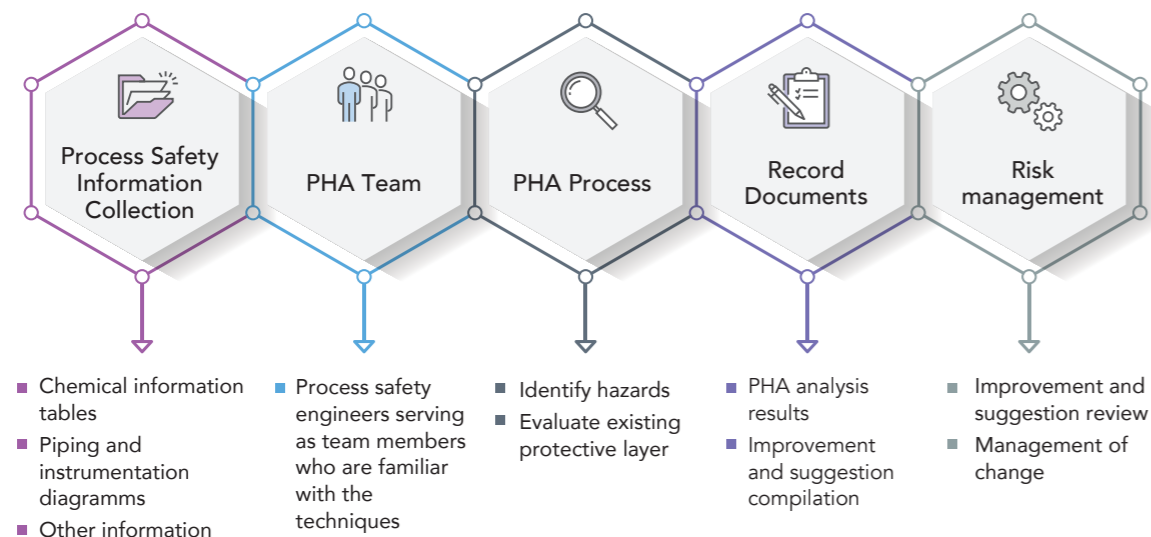
★ : Refers to the rate per 100 employees for 50 weeks per year with 40 working hours per week.

◆ Process Hazard Analysis (PHA)

Process hazard analysis is a major focus of Process Safety Management (PSM); it helps DCC identify hazards at an early stage. It also posts great benefit to process risk management in terms of personnel training, operations, process improvement, equipment maintenance, and contingencies. In 2020, DCC had 5 process safety engineers who were dedicated to Process Safety Management (PSM) promotion and implementation.

The PHA (process hazard analysis) team is formed by professional process, mechanical, electrical, instrumentation and safety and health personnel. Through brainstorming of possible hazards, a comprehensive risk management system is created to control hazards. The continuous running of PHA is the fundamental means for DCC's improvement in process safety.

► Process Risk Management Process



Process safety junior engineers play an important role on planning for process progress and actual process hazard analysis (PHA) involvement, to enhance their ability to analyze, the CCPG HSE Division holds an annual PHA seminar. Processes with serious accidents are selected, and process personnel who are familiar with the accident, process safety junior engineers, and PHA experts in the Group are invited to the seminar to discuss related matters. By breaking past mindset engraved in the department and reexamining existing PHA analysis results, deficiency and possible risks in design or operation can be identified. This approach helps improve the proficiency and acuity of the professional analysis ability of process safety engineers.

◆ Establishment of Monitoring Management for High-Risk Areas

DCC have set up a monitoring system for high-risk areas. The actual situation on the work site can be watched in real time in the control room or on authorized mobile devices. By doing this, the operational status of equipment and personnel's safety can be continually monitored. In 2020, CCDPJ completed the construction of a 100% networked provincial hazardous resources (Class I to Class IV) in the factory and 3-dimensional tilt photography layout network. The main functions include risk study, risk warning, one chart and one table, safety commitment, online inspection, auxiliary decision making, smart analysis, and comprehensive analysis. As we are dedicated to the safety of the factory, the entire factory is monitored 24/7 via the monitoring center.



◆ Safety Production Manual

Anomalies detected in processes could lead to further accidents if handled by personnel who do not possess the capabilities to handle such situations. Therefore, we have compiled a Safety Production Manual to specify handling of process hazards. Through performing intensive and continuous exercises, we help the front-liners become more skilled in handling abnormalities. To follow-up the effectiveness of exercises, the CCPG HSE Division sent employees to take part in 8 drills designed from the Safety Production Manual in 2020. An evaluation based on five major scopes was carried out: teaching material quality, instructor teaching, student learning, compliance with the execution frequency, and random testing. By making this effort, we hope we will be able to reduce human errors.



1.3.3 Response and management of major incidents

At DCC, our emergency preparedness and response plans are engineered in advance to prevent and eliminate possible loss of personnel, equipment and property due to accidents caused by disasters in the workplace.

When there is a chemical spill in the workplace, this may lead to possible fire, explosion, poisoning or accidental contamination; a major accident caused by a natural disaster that results in the above accidents; or handling of illegal intrusion, abnormal cargo, suspicious mail - all departments or factories must use the existing organization, manpower, and command system in the workplace to carry out countermeasures by all units in the workplace to mitigate damage, reduce personnel injury, while recovering the site as quickly as possible.

In 2020, DCC carried out emergency response training on drivers of transportation contractor, and response ability training and incident prevention drills on transportation contractors for large spills of tankers carrying toxic chemicals. Not only will we continue to strengthen our response capability to shipping incidents, DCC will also strive to improve the overall response capabilities of our shipping partners to work together to reduce the impact of chemical spills posed on the environment and society. DCC also began to promote fire preparedness planning in 2020. Areas lacking fire protection in factories were inspected. In the future, we will plan and enforce various related measures.

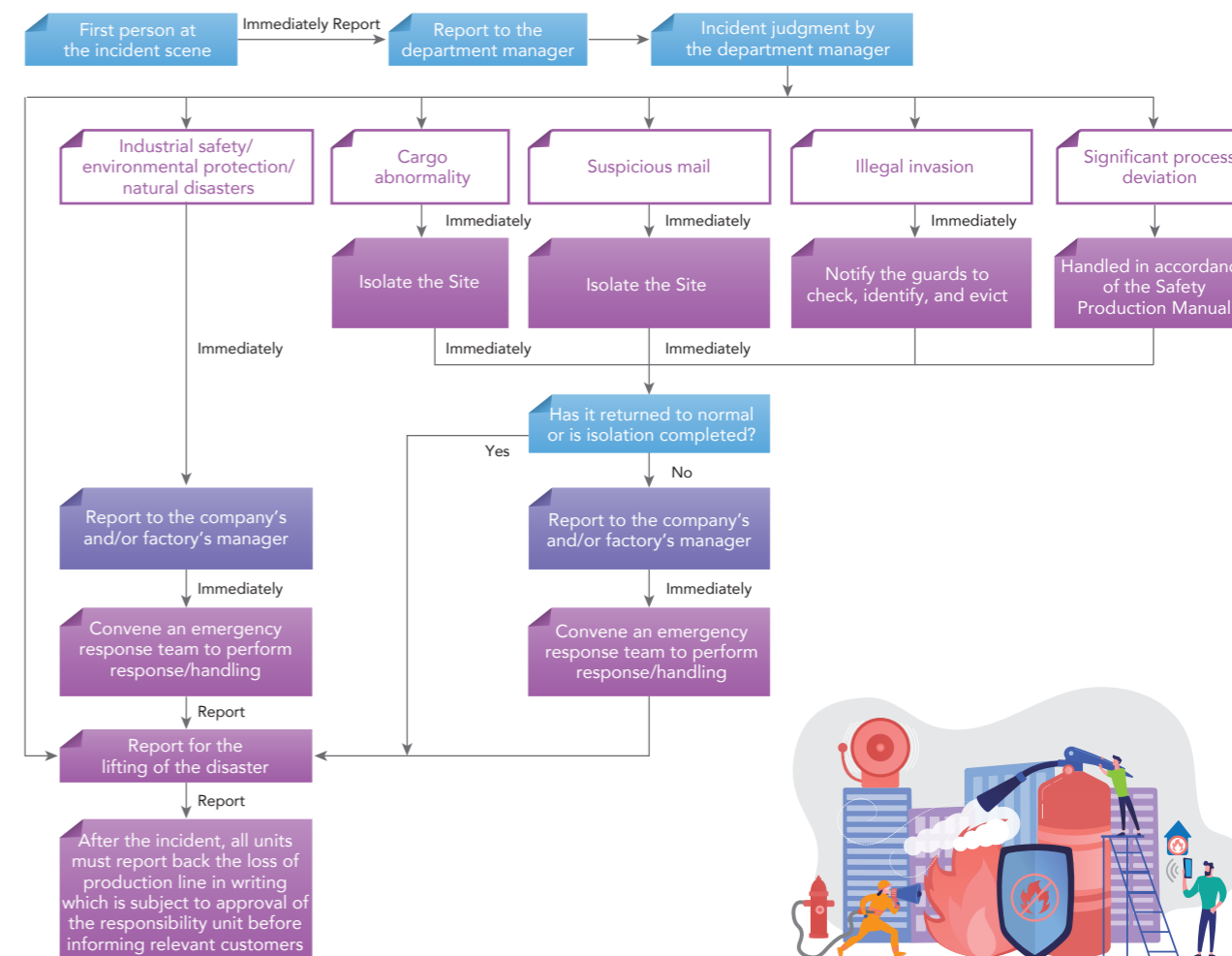
Management Approach of "Response and Management of Major Incidents"

Meaning of Material Issues	By providing our personnel with response training, incident analysis and regular emergency response drills conducted using different scenarios, employees are able to grasp response techniques and correct procedures. In the meantime, we will carry on with the review of our firefighting setup and constantly refine the management fire-related matters. By taking this approach, we are able to effectively reduce the impact on society and the environment in the event of a major accident.
Responsibility	Taipei Head Office: CCPG HSE Division, General Affair Division Factory: Safety & Health Department, Factory Affair Department, Process Departments
Policy and Commitment	Comply with the regulations set forth by the competent authorities and take reference from international standards. We are dedicated to continuously enhancing response strategies, equipment and manpower, while applying the policy to responses regarding factories, shipping, public pipelines and underground pipelines.
Target	<p>Boost emergency response capabilities and improve firefighting plans to enable minimal disaster loss and environmental impact.</p> <p>Short-term</p> <ul style="list-style-type: none"> To accommodate the amendment of the laws and regulations, we will complete the allocation of qualified personnel for each level as soon as possible so that each factory will complete the composition of professional responders at any time. Provide coaching to transportation contractors to strengthen their incident response capabilities and establish clear mutual support procedures to improve the road transport response mechanism. Raise colleagues' awareness of confined space hazards and recuse capabilities and strengthen their response in terms of confined space accidents. Strengthen the control of firefighting interruption risk to prevent the occurrence of fire accidents without fire protection. Promote education and training on fire preparedness planning and electronic fire inspection to help employees understand fire risks. <p>Medium-term</p> <ul style="list-style-type: none"> Establish emergency response information platform <ul style="list-style-type: none"> Professional responders and self-defense fire personnel allocation management. Regular management on response equipment. Operating procedures for all types of emergencies and response exercise management. Strengthen the response capability on transportation incidents; combine CCPG, with transportation contractors and professional response agencies to establish a response joint defense system that covers hazardous chemical substances of concern. Strengthen incident response capabilities in the factory <ul style="list-style-type: none"> Formulate response procedures for all types of scenarios targeting large-scale incidents to enable the responders to familiarize with the handling mode of complex disasters. Formulate operating procedures for handling high risk chemical spatters, and carry out periodic drills to rehearse personnel exposure scenarios to achieve the goal of reducing the injury levels. Large-scale drills should also be performed to improve the overall response plans. <p>Long-term</p> <ul style="list-style-type: none"> Response plan that links closely with high-risk stages of process <ul style="list-style-type: none"> Continue to promote process hazard analysis, incompatible substance analysis, and potential risk research on uncontrolled process reactions. Combine the strengths of external professional scholars with external engineers of all fields to construct a complete response plan.
Action Plan	<ul style="list-style-type: none"> Invest over NT\$3 million annually in industry-academia emergency response training to construct a complete response protection net that covers toxic and hazardous chemicals of concern requirements. Issue a fire checkpoint manual and develop a electronic inspection system for fire equipment, so that the accuracy of inspections is improved and fire equipment compliance thoroughly inspected. Continue to provide professional training to responders at all levels and properly allocate them to all shifts, allowing 24-hour responders. Enforce ISO Tank response training and toxic chemical joint defense with transportation contractors to develop a mutual understanding of and familiarization with all types of chemical disposal procedures. Add fire interruption applications into high-risk operation management systems and use the system to prevent fire interruption operations and fire operations from being carried out in the same area. Team up with the National Kaohsiung University of Science and Technology and Kaohsiung City Fire Department Special Rescue Team and perform practical training with confined space rescue equipment using the latest response training modules introduced by the National Kaohsiung University of Science and Technology.

2020 Implementation Result	<ul style="list-style-type: none"> Excellence Award was given to the drill carried out by Dafa Factory's Underground-piping Group 5 Dafa Factory implemented factory emergency response autonomous exercise refinement plan. CCDPJ aided Industrial Park of Liaodong Bay New District to put out 2 fires. DCCJS took part in the firefighting skills competition and came second.
Communication/ Grievance Mechanism	<ul style="list-style-type: none"> Place contact information for Environmental Protection Bureau, fire brigade, hospitals and neighboring factories in each factory's emergency response documents well as a proactive notification mechanism in case of an incident. Build an APP that makes SDS available on mobile phones so that front-line responders can quickly check the characteristics of the chemicals carried by the truck using the vehicle registration plate to speed up the response process. Mailiao Factory and Dafa Factory take the initiative to inform neighboring communities of the suspension of operations and the situation with respect to anomalies, as well as the potential risks to operations in the hope of reducing the concerns of local communities and related units. We do our utmost to maintain a good neighboring living environment while keeping a sound community relations. Mailiao Factory takes part in the No. 6 Naphtha Cracker Environmental Evaluation Committee on a quarterly basis.

Emergency Response Procedures

To ensure smooth elimination in the event of an accident, we formulate handling procedures targeting all types of scenarios. The response team of each factory also carries out drills and reviews on a regular basis. At DCC, we continue to optimize staff proficiency and response procedures through repetitive drills and improvements.



2020 Emergency Response Drill Plan

Mailiao Factory Continues to Participate in Joint Drills of the Public Pipelines in the No. 6 Naphtha Cracker Complex

The public pipeline of the Mailiao Factory is part of the public pipeline system of the No. 6 Naphtha Cracker Complex in Mailiao. In order to familiarize employees with the relevant response actions and mechanisms to continue to optimize internal response measures, from 2017, the factory has performed large-scale joint response drills alongside the fire brigade, the pipeline team, and relevant response teams in the complex. By making this effort, the last line of defense for the safety of the public pipelines is strengthened and the impact of disasters minimized. In 2020, Mailiao Factory and the Formosa Plastic Group jointly completed one public pipeline no-warning drill and a large-scale methanol response drill.



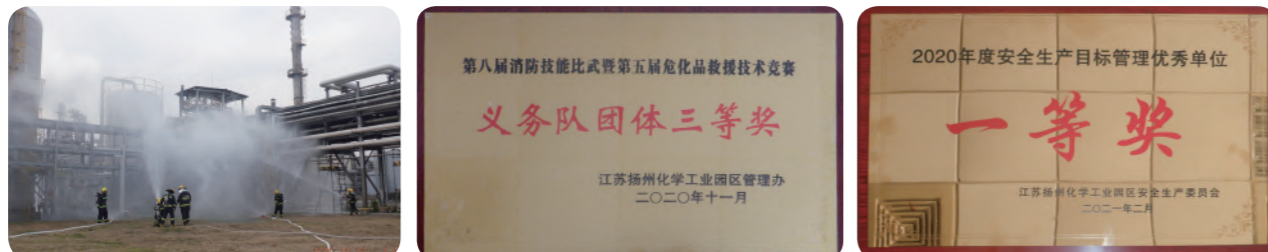
Dafa Factory - Factory Emergency Response Autonomous Exercise Refinement Plan

Dafa Factory has set targets for each department's emergency response drill management focusing on evaluations with respect to alertness, notification process, response process and tests on the firefighting operations or response equipment. Random tests with no-warning drills are conducted by the Safety and Health Department. In 2020, the average score of the random test in the response drill reached 91.5, in line with the target, and increased by 16% compared to 2019.



DCCJS - Took part in the firefighting skills competition and came second

DCCJS performs a large-scale joint response drill with the fire brigade of the Park every six months to improve its response skill. In 2020, the factory won the third prize in the firefighting skills competition in the Park. Thanks to its excellent performance on safety management, the factory has won the first prize for Park safety production management for a number of years and was once awarded the annual advanced group in firefighting by the Park.



Disaster and Emergency Response Relief

CCDPJ - Assisted in disaster relief for the Industrial Park of Liaodong Bay New District

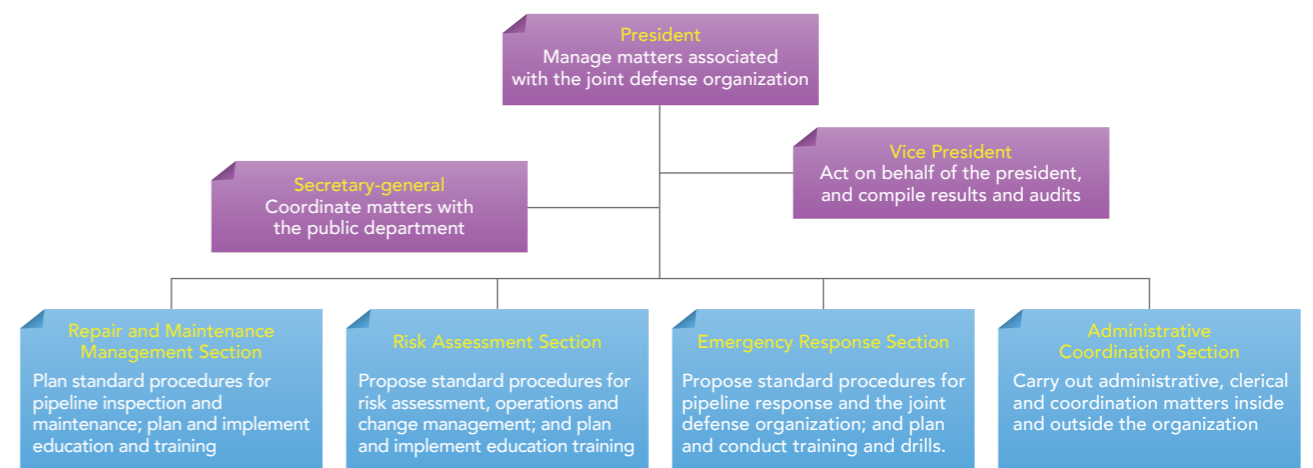
CCDPJ has a professional fire brigade and fire engines in place in the factory, and in 2020, it took part in putting out two fires - a fire incident at Huanglong Technology Company on August 3, and an oil tanker leakage incident on Zhonghua Road on August 8. The Company's emergency response and firefighting capabilities were highly regarded by the competent authorities.



◆ Emergency Response to Pipeline Transport Disasters

We strive for the continuous improvement of the autonomous management of underground industrial pipelines. We comply fully with applicable regulations of the competent authorities and implement comprehensive evaluation on the safety of pipelines. Each year, we formulate pipeline maintenance and prepare plans and ensure the normal and safe transport of raw material fluids through on-site electronic inspection of pipelines, a leak detection system, corrosion potential and closed-interval potential of regular inspection, inclusive management of regular pipeline thickness measurement, such as Intelligent Pig to prevent pipeline damage and leakage hazards. In addition, we raise public safety awareness and establish public relations of underground industrial pipelines through the joint defense organization. In 2020, we held a total of 5 sessions of scenario planning and 5 practical drills.

► Joint Defense Organizational Chart



Kaohsiung Factory - Organize and manage the Underground-Piping Group 6 Emergency Response Joint Prevention Work

Kaohsiung Factory serves as the leader of the emergency response team at the joint defense organization in the underground-piping group 6 of the Kaohsiung City underground industrial pipelines to oversee the coordination, planning, and handling of the emergency response joint defense work in the "underground-piping group 6" for 11 underground industrial pipeline companies (including CPC Corporation, Formosa Plastics Corporation, LCY Chemical Corp., China Petroleum & Chemical Corporation, and USI Corporation). The effort in the underground-piping group 6 has helped DCC Kaohsiung Factory to be honored as an excellent joint defense organization in the field of underground pipelines by the Industrial Development Bureau for three consecutive years.

In 2020, we conducted a night drill for the scenario of an underground ethylene pipe leak. Kaohsiung Factory, as the incident emergency response support Section, was responsible for the incident site response status registration board while supporting equipment collection inventory.



Underground-Piping Group 6 Night Emergency Response Drill

Road Transportation

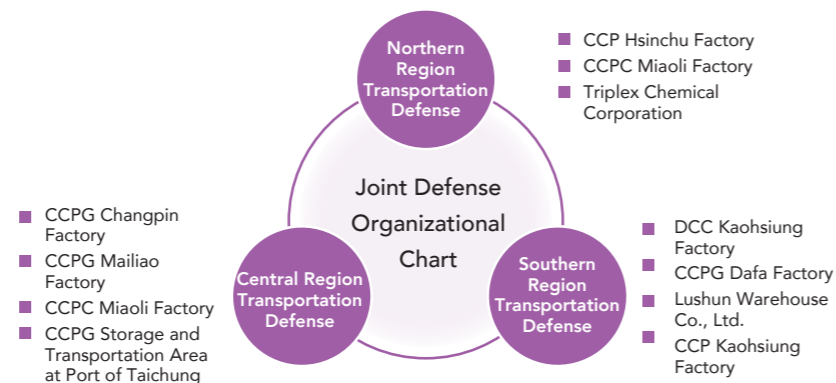
DCC manufactures a wide range of products, which are transported by land to mid-and downstream factories covering the whole of Taiwan. However, chemicals may leak during shipping due to vehicle overturn or collision caused by a natural disaster or careless operation of personnel, posing danger to road safety and the environment.

In an attempt to prevent this, CCPG carried out 24 transportation contractor evaluations in 2020 targeting contractors' autonomous safety management. We aim to reduce the occurrence of transportation accidents by improving transportation contractors' management regarding equipment inspection and maintenance, personnel management and education and training, and emergency preparedness. Simultaneously, we have begun to train and inspect contractors' response capabilities and response equipment to strengthen their proficiency in the operation of various response measures and handling of chemicals.



2020 Transportation Contractor On-site Assessment

At DCC, in an irregular event that involves chemicals tipping over as a result of a vehicle overturn or chemical leakage on the road, and in order to catch the golden hour to effectively reduce and control the scope of the chemical impact, while also planning and integrating the response capabilities of the Group's production factories in the North, Central and South districts, we have set up a Transportation Joint Defense Organization with factories of CCPG. In the event of an accident during the delivery of chemicals transported by the Company, the Organization can promptly dispatch responders from nearby production factories to perform joint first-aid, reducing disaster damage and avoiding secondary hazards.



2020 Toxic Chemical Tanker Mass Leakage Drill



DCC continued to strengthen our response actions targeting the scenario of mass leakage of a toxic chemical tanker and repeatedly rehearsed the situation. By doing this, we have enabled the responders of DCC to familiarize themselves with the on-site response procedures and personal protection key points, while also enhancing the functions of commanders and safety officers, increasing the personnel's safety while also getting the situation under control.

Accident Emergency Response Training and Joint Drill for DCC's Transportation Contractors

In 2020, combining the power of external professional scholars, DCC invited 71 drivers and 55 ERT members of the Group's transportation contractors situated in the North and South districts to participate in a joint emergency response capability training and transportation accident drill. We hope that we will grow alongside our shipping partners in response to possible risks and challenges brought by transportation incidents.





2 CHAPTER

Low Carbon Sustainability



- 2.1 Environment Protection Strategy
- 2.2 Climate-related Risks and Opportunities
- 2.3 GHG Management
- 2.4 Water resources management
- 2.5 Discharge Management

Key Performance



NT\$550 million invested

NT\$550 million was invested in environmental protection



84 energy conservation projects

A total of 84 energy projects were implemented, reducing costs by NT\$140 million



Total 150 million liters of rainwater recovered



11,676 tCO₂e carbon rights obtained

11,676 tCO₂e carbon rights obtained from the GHG exchange project



TCFD promoted

Task Force on Climate-Related Disclosures (TCFD) was promoted and 8 climate risk events and related opportunities assessed to conduct quantitative financial impact evaluations

Among all the industries, the chemical industry has always been regarded as an energy-intensive industry with high environmental risks. As a sustainable manufacturer, minimizing the impact of our daily operations and processes is DCC's basic mission and a direction we strive for. To achieve that, we implement environmental protection measures in all factories and on employees. At DCC, by integrating environmental cost accounting with our products and financials, we continue to improve the evaluation of our product costs. At the same time, we are also fully prepared for the future carbon pricing trend, implementing our commitment to environmental protection.

2.1 Environment Protection Strategy

At DCC, we realize that companies should do more than just pursue profits; they must also fulfill corporate social responsibilities. For that reason, we regard "environmental protection" as our top mission and we are a firm believer that a good management system can improve the environment and the well-being of people.

DCC follows the environmental safety and health and the energy policy of CCPG, and our management objective is to meet or exceed the standards set out by the law and to implement applicable environment protection measures. To achieve our objectives, each factory consistently improves their waste recycling and production capabilities, with the aim of reducing the amount of pollution produced during manufacturing processes. Furthermore, we invest in pollution prevention and process equipment in order to achieve sustainable development through the best feasible technical measures to maintain, replace and add new equipment.

◆ Environmental, Safety and Health and Energy Policy Statement

DCC's factories have all launched the ISO 14001 environmental management system to ensure that emissions and waste disposal in our production processes meet the statutory requirements. For management and response regarding major environmental issues, we have launched ISO 9001 and ISO 45001 to implement integrated management in terms of the environment, occupational personnel safety and health and quality, creating maximum benefits. In 2019, we began to introduce the ISO 50001:2018 energy management system to establish power equipment identification and energy indicators in each plant. We promote energy saving and carbon reduction activities through planning improvement measures for major energy equipment. At DCC, in line with the Renewable Energy Development Act regarding the use of green energy, we are currently in the process of installing renewable energy in our factories in Taiwan and overseas, make an effort on renewable energy and energy conservation and carbon reduction (please refer to 2.2 Climate Change Risks and Opportunities). For our grievance mechanism, please refer to 3.3 Communication with Stakeholders.



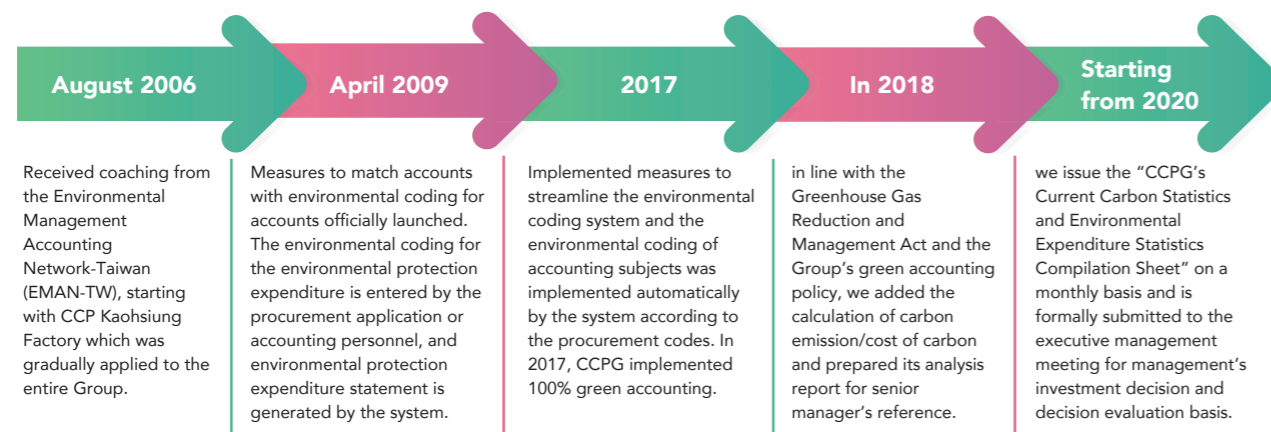
Environmental,
Safety and Health
and Energy Policy
Statement

◆ Environmental Protection-related Expenses

At DCC, we do our utmost to fulfill the commitment of sustainable operations. In 2020, we spent NT\$390 million on environmental protection and invested NT\$160 million on environmental protection programs (programs set up with over NT\$1 million). Moreover, we constantly invest on related equipment so as to reduce the impact of our production processes on the environment.

◆ Green Accounting Promotion

As a means to clearly summarize the Company's expenditures on environmental protection, DCC continue to support and be in line with the green accounting promoted by CCPG, our involvement includes the following:



◆ Environmental Cost-effectiveness Evaluation

On par with the environmental protection trend, DCC performs internal carbon cost calculations to facilitate the future overall carbon asset management. In addition, we also evaluate investment projects involving pollution prevention equipment and other capital expenditure to reduce the impact of products or processes posed on the environment and promote environmental cost-effective management. With Singapore's carbon tax implemented in 2019, China will also enforce its GHG emission pricing. In the future, our financial management and environmental cost will incorporate GHG emissions. In terms of new investment or expansion of production lines, comparison between carbon emissions and carbon cost-effectiveness will also be added. The environmental cost-effectiveness evaluation is performed by the CCPG HSE Division from the perspective of the Company's carbon emission management.

◆ Legal compliance

In terms of deficiencies in each case, DCC has conducted reviews, and addressed all deficiencies and progress tracking. In 2017, we also formulated the "Regulations Identification Guidelines" which includes: notification of drafting Taiwan's environmental safety and health regulations, environmental safety and health regulations conformity identification, management of targets that are prone to the impact of the environmental, safety and health regulations identification, regular evaluation of permit conformity, regulatory inquiries, and notification of the evaluation result. By integrating the regulations associated with identification and processes, we are able to manage and evaluate them at the same time. The handling person, department manager of the Safety and Health department of each company (factory), oversee regulatory inquiries, in the hope reducing fines by 40% per year in the medium and long term. Moreover, there was no pollution of water resources, toxic chemicals, soil and groundwater in 2020. Our ultimate goal is to have zero fines, which will showcase our dedication to our community residents and surrounding environment.

► Statistics of Number of Environmental Violations and Fines for 2019-2020

Unit: NT\$10,000

Item / Year	2019		2020	
	Number of Cases	Amount	Number of Cases	Amount
Air pollution	3	30	2	77.5
Waste pollution	2	54.7	0	0
Total	5	84.7	2	77.5

Note 1: The incidents disclosed here are mainly deficiencies with fines over NT\$100,000.
 Note 2: The remaining pollutants not listed in the table represent no violations in the year.
 Note 3: For detailed information on each factory for 2020, please refer to Appendix B.



ESG Report
Appendix

2.2 Climate-related Risks and Opportunities

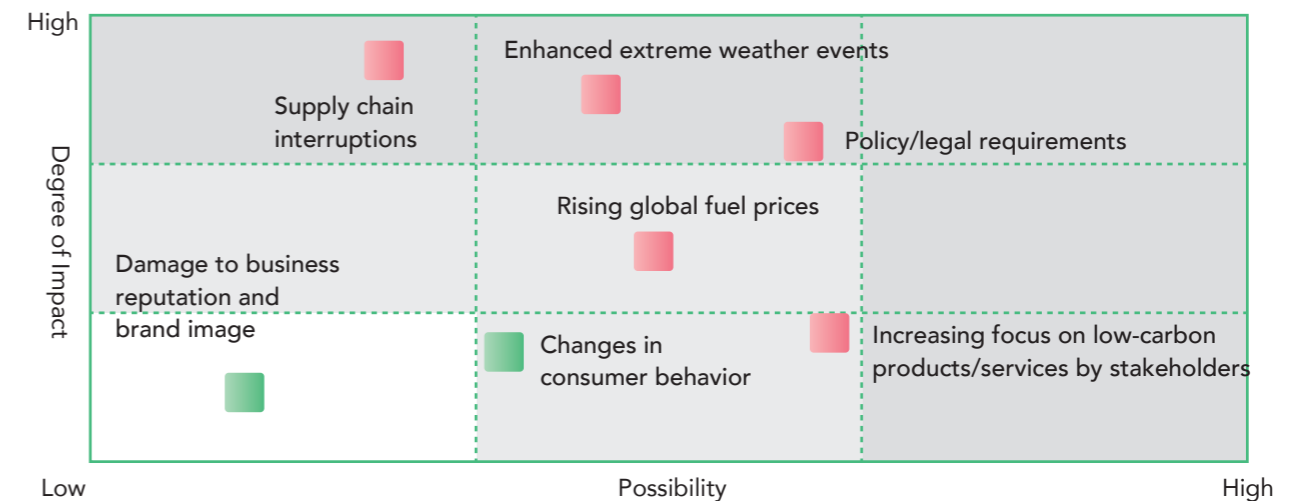
In order to maintain corporate sustainability, DCC evaluates possible impacts on its operations under extreme climate threats, including foreign carbon tariffs, renewable energy and water stress. Due to these concerns, the Task Force on Climate-related Financial Disclosures (TCFD) was introduced in DCC in 2019 to collect climate change issues of the Company and each factory so that any issue that the Company regards as an impact as a result of a climate change can be identified and countermeasures planned. Through evaluation, appropriate decisions can be made and actions taken by all levels to effectively reduce the impact on the Group.

In 2020, we continued with the issues identified in 2019 to deepen our climate change management practices. In accordance with the TCFD guideline framework, we further evaluated the financial impact, management establishment and related opportunities targeting the climate risk events of each stage of DCC's operations. The outcome from the identification is used as the basis to gradually establish management mechanisms and measurement indicators.

Step 1	Climate change risk awareness building Collect international trends in relation to climate change, search reports and benchmark analysis; build the concept of TCFD through education and training to increase the awareness over climate change issues of DCC's colleagues.
Step 2	Establish climate related risk issues In 2019, through interviewing all units, DCC collected and summarized 21 issues related to climate risks that posed possible impact on operations. According to characteristics of these issues, 7 major climate change risks were categorized: enhanced extreme weather events, policy/legal requirements, increasing focus on low-carbon products/services by stakeholders, supply chain interruptions, rising global fuel prices, changes in consumer behavior, and damage to business reputation and brand image.
Step 3	Identify significant climate-related risk issues We have compiled these 21 issues of 7 major categories into a questionnaire for internal units of the Group to analyze the likelihood and impact of each issue in a given scenario (RCP8.5 for physical risk and STEPS (Stated Policies Scenario) for transition risks). The top 5 climate-related risk issues that pose a significant risk to the Group through the risk matrix are enhanced extreme weather events, policy/legal requirements, increasing focus on low-carbon products/services by stakeholders, supply chain interruptions, and rising global fuel prices. Climate change opportunities must also be taken into consideration.
Step 4	Quantification of Impact on the evaluation of DCC's climate-related risks and opportunities Based 2019 results, we further evaluated risk issues related to the top 5 climate-related risk issues that posed significant risk in 2020, and have identified 8 climate risk events. We realized the impact that climate could pose the operations of our factories and Group as a whole and quantified them in the given scenarios. At the same time, DCC also reviewed and quantified the benefits of opportunities from climate change issues. Among these, the risk event "port closure due to a typhoon affecting export" is not considered to pose an impact on DCC as contracts mostly list typhoons as a force majeure, or delivery times can be set with more flexibility. Given this, cancellation of orders or penalties imposed due to a typhoon is low.
Step 5	DCC's management response to climate-related risks and opportunities We have further proposed management actions and responses to 8 significant risks events and opportunities identified in the inventory, and list the related management costs.

- Water scarcity pressure affecting factory operations
- The ban on coal burning
- EPA fines for major carbon emitters
- Pressure of installing renewable energy for major power users
- Carbon tariffs imposed by EU
- Port closure due to a typhoon which results in shortage or disruption of raw material supply
- Port closure due to a typhoon that affects export
- Customers reducing orders as a result of DCC's poor sustainability performance

► DCC Climate-related Material Topic Matrix



Note: Enhanced extreme weather events including the increase in typhoon intensity, the increase of instantaneous rainfall, and the update of high-temperature records over the years may cause changes in shipment schedules, damage to factory equipment and increase shipping costs.

► DCC's Climate-related Risks

Type of TCFD Risk	Significant Risks	Risk Content	Impact on the enterprise	Financial impact under climate scenarios	DCC's Response
Physical - Immediate	Enhanced extreme weather events	Water scarcity pressure affecting factory operations	According to a study conducted by the Water Resources Agency under RCP8.5, it suggests an increasing trend of annual water scarcity in recent years (2021-2040) in the areas where our factories are situated.	In the event of an increasing water scarcity rate, once the Water Resources Agency imposes the Level 3 water restriction measure, it will cause some of the production processes in the factory to shut down, resulting in a decrease in revenue.	<ul style="list-style-type: none"> Increase resource reuse rate Improve equipment efficiency Process heat integration to reduce volatilization loss Enhance weather status tracking system and drills Improve water supply capacity through desalination plants
Transformation - Policies and Regulations	Policy/legal requirements	Pressure of installing renewable energy for major power users	The Renewable Energy Development Act promulgated by the Ministry of Economic Affairs requires major power users to install renewable energy up to 10% of the installation capacity within five years from 2021	Factories listed as major power users need to find new site to install renewable energy, posing installation costs	
Transformation - Policies and Regulations	Policy/legal requirements	EPA fines for major carbon emitters	With the amendment to the Greenhouse Gas Reduction and Management Act, "carbon fees" will be imposed. As the Group and various factories are on the first control list, it is likely charges are inevitable for carbon emissions.	Charges on carbon emissions will increase the Group's operating cost.	<ul style="list-style-type: none"> Use energy-saving and high-efficiency equipment Install solar power or energy storage equipment Improve processes to reduce energy consumption Improve cogeneration efficiency
Transformation - Policies and Regulations	Policy/legal requirements	The ban on coal burning	Under the trend of net zero carbon emissions, the use of coal burning is likely to be reduced in the future. The original cogeneration plant will not be able to supply the steam and electricity required for production processes and production capacity will be affected.	The original cogeneration factory that burns coal has been evaluated and will be replaced by other low carbon fuels, which require equipment replacement and fuel cost. Without immediate response, it will not be able to supply sufficient heat energy which will result in some processes shutting down.	

Type of TCFD Risk	Significant Risks	Risk Content	Impact on the enterprise	Financial impact under climate scenarios	DCC's Response
Transformation - Policies and Regulations	Policy/legal requirements	Carbon tariffs imposed by EU	The EU will propose a carbon border adjustment mechanism (CBAM) to impose a carbon tariff on products exported to the EU.	Evaluate products that are sold to the EU; due to the impact of carbon tariffs, product costs will increase	<ul style="list-style-type: none"> Promote energy conservation to reduce the carbon intensity of products Achieve product energy consumption benchmark
Physical - Immediate	Supply chain interruptions	Port closure due to a typhoon which results in shortage or disruption of raw material supply	According to a study conducted by the National Science and Technology Center for Disaster Reduction under RCP8.5, the intensity of typhoons will continue to increase. Taking this into account, ports will close, delaying the import of raw materials	The port is closed due to a typhoon and the import of raw materials is affected	<ul style="list-style-type: none"> Make shop schedule planning more flexible Reinforce inventory management and flexible scheduling
Transformation - Business Image	Damage to business reputation and brand image	Customers reducing orders as a result of CCPG's poor sustainability performance	Major international manufacturers request CCPG to take part in international evaluations and if performance is not up to expectation, this may affect results of supplier assessment.	Evaluate that if a supplier performs poorly on assessment of environmental issues, procurement may be reduced	<ul style="list-style-type: none"> Enhance the Group's sustainability performance Continue to research the possibility of the reduction of environmental impact on the process and product specifications

► DCC's Climate-related opportunities

Type of TCFD Opportunity	Climate-related Opportunities	Measure	DCC's Benefits	Management Approaches adopted by DCC
Resource Efficiency Improvement	Improve building energy consumption efficiency	Develop building energy conservation materials (VAE powder application)	To reduction of energy consumption, the exterior walls of buildings must be insulated. The use of VAE powder for finishing cement mortar provides excellent adhesion for insulating materials, and is expected to expand its market share.	<ul style="list-style-type: none"> R&D expenses (personnel salary, patent application) Hardware equipment (e.g. factory establishment) Industry coaching, license verification, etc.
	Reduce water and resource consumption	Improve the efficiency of wastewater treatment plant	After the diffuser in the aeration tank was updated, the aeration efficiency improved, while also increasing the treatment efficiency of COD. The operations for sludge dewatering machine and sludge drier were also optimized to reduce business waste and energy consumption.	
Low Carbon Energy Use	Low Carbon Energy Use	Set up solar energy	Increase the proportion of own energy use, reduce GHG emissions, and reduce future expenditures if carbon taxes are enforced	
	Involve in the carbon market	Application for GHG offset project	A total of two GHG offset projects were applied for future carbon rights	
Product and Service Quality Improvement	Development and/or expansion of low-carbon merchandise and services	1,4-Butanediol (BDO) for decomposable plastic materials	BDO is one of the main raw materials for PBAT and PBS - biodegradable plastics, which DCC is now proactively investing in, hoping to increase their sales in the future.	
Corporate Resilience	Resource Alternatives / Diversification	Reuse of Carbon Dioxide (CO ₂)	Collect Carbon dioxide from processes for friends of the industry to be made into carbon monoxide as a raw material for acetic acid to save cost.	

DCC Solar Power

Impacted by the Renewable Energy Development Act, Kaohsiung Factory is expected to invest approximately NT\$50 million in the installation of 964 kW of solar power by the end of 2022. After completion, it is expected to save a capacity of 1,205 MWh annually.



Solar panels have been installed on the warehouse roof of DCCM. The installation capacity is 368 kW and the annual power generation capacity is estimated to reach 495 MWh. The power generation will account for 5% of the factory's electricity consumption, reducing electricity cost by 4.7%.

CCDSG on the other hand will be on par with the Singapore government's energy policy. The installation plan is under planning and design, which is expected to be completed by the 4th quarter of 2021, and expansion will be subsequently installed. The project is expected to generate 225 MWh of power each year.

2.3 GHG Management

DCC adopts a proactive management and response approach when it comes to climate change, energy conservation and carbon reduction. We hold a monthly energy conservation and carbon reduction meeting to make adjustments on the execution direction matters, while continuing to follow-up their effectiveness. On the subject of management policy, the CCPG HSE Division regularly monitors and follows up changes in applicable regulations and proposes countermeasures. A GHG inventory is performed each year to ensure the effectiveness of energy conservation and carbon reduction in the current year. Plans for the following year are also proposed, which are implemented accordingly.

2.3.1 GHG Emission Management

Taking a reference from Taiwan's Phase II GHG Reduction Control Target (draft), that stipulates that the manufacturing sector should aim to reduce their GHG emissions by 0.22% in 2025 compared to the base year (2005) (7.05% reduction in 2025 from 2018), DCC has set a GHG emission reduction target using 2018 as the base year and aims to reduce GHG emissions by 7.05% in 2025. As a means to keep hold of the petrochemical industry's development status under the goal of low carbon emissions, DCC proactively takes part in the "Working Group for the Petrochemical Industry's Response to the Greenhouse Gas Reduction and Management Act" initiated by the Industrial Development Bureau and the "Petrochemical Industry Communication Platform" initiated by the Petrochemical Industry Associated of Taiwan. We will continue to work closely with government goals and communicate with the Industrial Development Bureau in the meetings regarding the industry's need for low carbon development.



Using 2018 as the base year, DCC's target is to reduce GHG emissions by 7.05% in 2025

To achieve this, the Company will take proactive measures in terms of the promotion of reduction measures, while also carrying out rolling reviews, including tracking energy consumption, GHG emissions and benefits of the reduction of each factory. At the same time, we will hold energy conservation and carbon reduction meetings monthly to review whether the Company's current carbon reduction measures have reached their target. A project team will be set up for evaluation and improvement for factories that fail to reach the targets.

Each year, DCC's factories in Taiwan must obtain third party verified ISO 14064-1 GHG verification, as well as statements issued by a third-party certification entity. The inventory results must be registered on the National Greenhouse Gas Registry Platform before the end of August each year.

Factories in China conducts an annual GHG inventory in accordance with the "Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Petrochemicals Production Enterprises in China". The Company will continue to strive for the promotion of energy conservation and carbon reduction activities to reduce GHG emissions. Please see 2.3.2 Energy Conservation and Carbon Reduction Actions.

► DCC 2018-2020 GHG Emissions

Unit:ktCO₂e

GHG Type	2018	2019	2020
Direct GHG emissions (Scope1)	553	452	424
Indirect GHG emissions (Scope2)	1,999	1,919	2,093
Total Emissions	2,552	2,371	2,517
Net Sales (NT\$ million)	72,006	56,843	49,561
Unit sales GHG emissions (ktCO ₂ e / NT\$ million)	0.035	0.042	0.051

Note 1: GHG emissions in Scope 1 include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs); no other gases were emitted.

Note 2: GHG emissions in Scope 2 include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O); no other gases were emitted.

Note 3: The data of Scope 1 and Scope 2 of GHG emissions by all factories were reported to the Environmental Protection Administration (EPA). There is no inventory conducted for Scope 3.

Note 4: For data of overseas factories, only carbon dioxide (CO₂) emissions were checked in China factories.

Note 5: The global warming potential (GWP) is based on the IPCC Fifth Assessment Report (2013).

Note 6: GHG emission factor: The calculation for Taiwan factories is based on the latest data released by the EPA during inventory. In terms of grid emissions, as the Bureau of Energy has not yet released their 2020 emission results, 0.509 kgCO₂e/kWh was used for the calculation for 2020, while previous years were based on the data released at that time. Grid emissions for China were based on the local power grid, while the rest of the emission were calculated based on the "Guidelines for Accounting and Reporting Greenhouse Gas Emissions for Petrochemicals Production Enterprises in China".

Note 7: For detailed information on each factory for 2020, please refer to Appendix B.

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◆ Application for GHG offset project

In response to the carbon fees imposed by the Climate Change Response Act or to execute carbon trading system, the Company applied for the "Heat Medium Boiler Fuel Modification" exchange plan for DCC Dafa Factory in 2019. Verification operations were carried out in 2020 and after being approved by the EPA, the carbon rights account was opened. Furthermore, we also obtained 11,676 tCO₂e of credits for future use. in the event of insufficient carbon rights

◆ Carbon Cost Management - Internal Carbon Cost System Construction

DCC's internal carbon cost system is set up through the information of fuel, electricity, steam and process gas and liquid as well as the emission factors of each factory's GHG inventory. The carbon cost of each product is calculated based on the cost sharing principle of the financial system, and for every year, verification of each factory's GHG inventory is conducted to allow the internal carbon cost information to be close to the actual emissions. This is to facilitate the management of carbon assets in response to the future carbon trading market's enforcement of total control by laws and regulations.

CCDSG's Response to the Carbon Tax System

Singapore initiated its carbon tax system in 2019. The current carbon tax at 5 SGD/tCO₂e and is expected to rise to 10 SGD/tCO₂e in 2024 and 15 SGD/tCO₂e in 2029. In a bid to reduce CCDSG's additional cost arisen from the carbon tax, we dedicate ourselves to promoting a variety of energy conservation and carbon reduction actions, such as heat integration, utility equipment optimization and the addition of oxygen detectors to enhance the combustion efficiency of incinerators to reduce energy consumption and heat loss. The factory utilizes renewable energy on par with the Singapore government's energy policy, and solar panels on the warehouse roof are also expected to be installed by the 4th quarter of 2021.

(for detailed actions for heat integration and incinerators, please refer to 2.3.2 Energy Conservation and Carbon Reduction Actions; for renewable energy in Singapore, please refer to 2.2 Climate-related Change Risks and Opportunities).

2.3.2 Energy Conservation and Carbon Reduction Actions

By following the CCPG's promotion of energy conservation and carbon reduction measures, DCC reduce the impact on the global environment and climate by improving energy utilization efficiency and enhancing energy and GHG management.



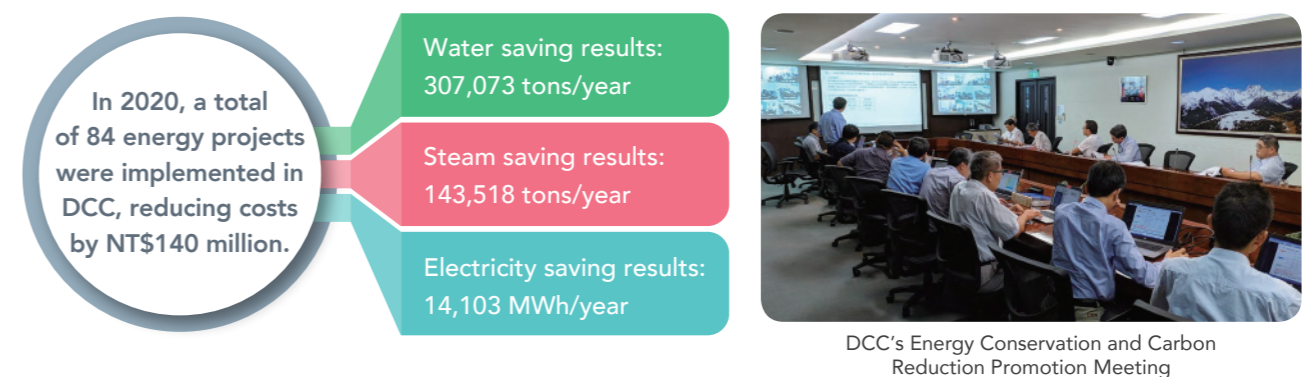
DCC's energy conservation and carbon reduction target: Annual reduction of 3% in the original unit consumption of water, and products that consume steam and electricity in each factory

◆ DCC's Energy Conservation and Carbon Reduction Promotion

Since the Energy Conservation and Carbon Reduction Promotion Organization was established in 2018, the Group's target has been to reduce the original unit consumption of products by 3% each year. Chairman Lin and senior management of the Group hold meetings in person to review the reduction operations for electricity, steam and water consumption in each factory.

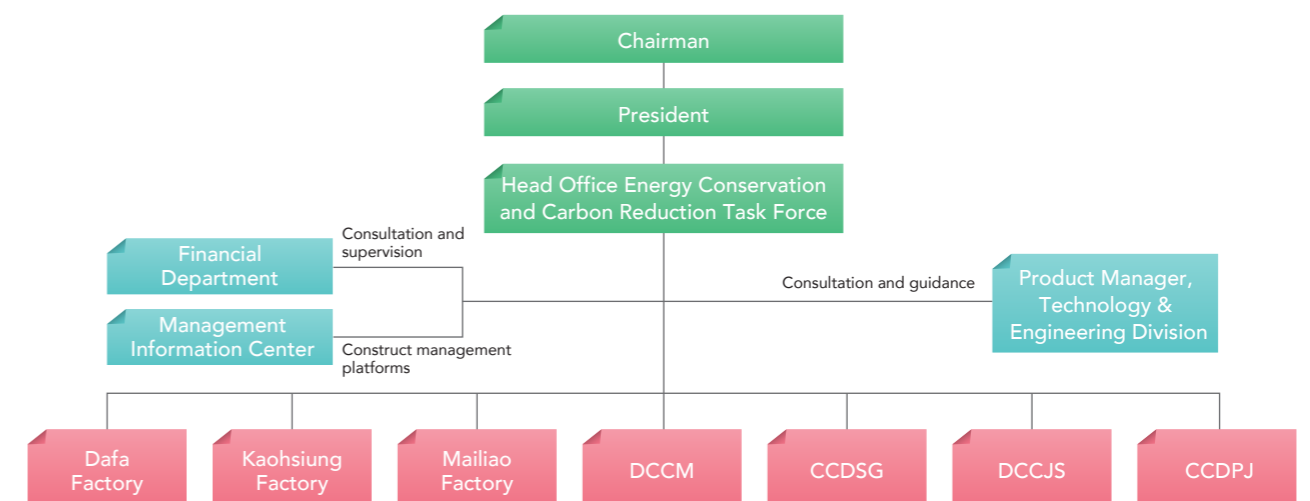
A total of 18 energy consumption review meetings were held in 2020; through discussions in the meetings, all factories were able to learn with efficiency, while continuing to implement various energy conservation measures in their factories. This approach does not only reduce energy costs, it also reduces GHG emissions, thus fulfilling its corporate social responsibility.

As climate change becomes increasingly severe, and with the leadership of Chairman Lin, we continued to promote carbon reduction in 2020, and have formulated specific plans and planning schedules. The Group make all efforts when it comes to carbon reduction issues, and strive for the target of net zero carbon emissions set by the "UN Climate Action Summit".



◆ Framework of the Energy Conservation and Carbon Reduction Promotion Organization

► DCC's Energy Conservation and Carbon Reduction Promotion Organizational Chart



DCC Dafa Factory was awarded an Excellent Manufacturer for Voluntary Reduction by the Industrial Development Bureau, MOEA

Through an external counseling unit and colleagues in the factories, DCC Dafa Factory developed the idea to perform BDO (1,4-butanediol) heat integration in 2020. The heat exchange between the process condensate (100° C) and the residual heat of the process, which is heated and pressurized to 150° C, is fed to the allyl alcohol (AAL) process and then to the polytetramethylene ether glycol (PTG) process, thus reducing the external steam volume of the AAL and PTG processes by 1,300 tons/day. With delivery of outstanding energy conservation and carbon reduction results, this project was awarded in recognition as an excellent manufacturer for voluntary reduction by the Industrial Development Bureau, MOEA in 2020.



BDO Process Heat Integration



AAL Process Heat Integration



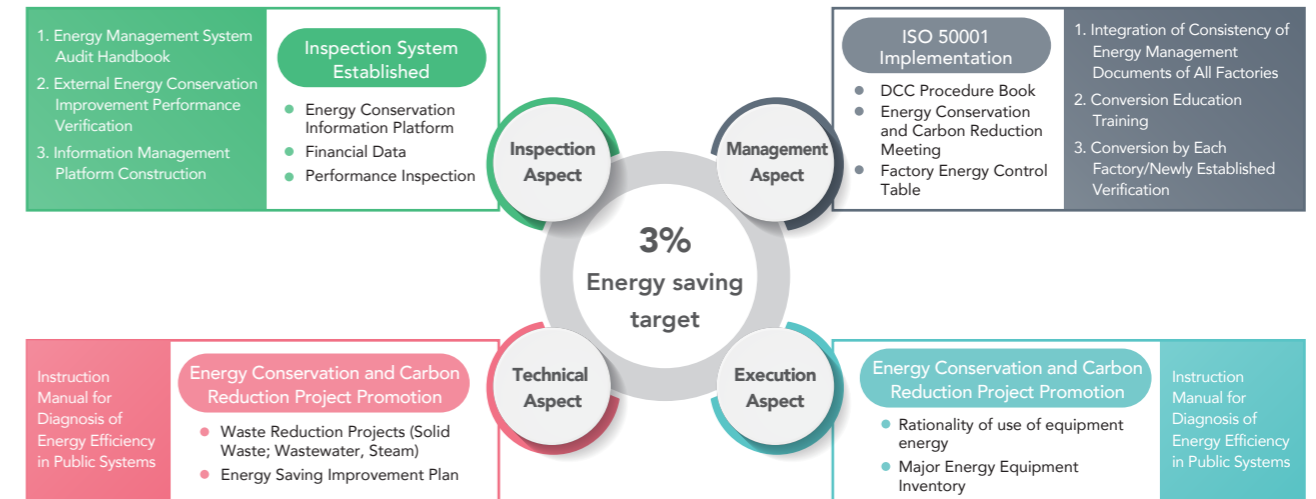
2020 Voluntary Reduction Project by the Industrial Development Bureau, MOEA - Award Photo



◆ The Factory's Implementation of the ISO 50001 Energy Management System

At DCC, with the intention to effectively manage energy use and improve energy efficiency, we planned a series of related activities in 2019. A strategy map for energy conservation and carbon reduction was proposed based on four major factors: management, implementation, technology and verification, hoping to strengthen colleagues' capabilities on energy conservation and carbon reduction. At the same time, the ISO 50001 energy management system was also implemented, while the Group proactively pursued the energy management counseling program initiated by the Industrial Development Bureau, MOEA. Through establishing the Plan-Do-Check-Act (PDCA) mechanism as well as related criteria and methods, and over a year of counseling, our 3 major factories in Taiwan were all verified by a third-party agency in 2020.

► DCC Energy Conservation Carbon Reduction Strategy Map



CCDSG's Heat Integration Energy Saving Measures

The heat integration project was completed in the allyl alcohol factory in 2019 and actual benefits were shown in 2020. After an analysis was conducted, the annual steam were approximately 67,093 tons, equivalent to a reduction in carbon emissions of 20,242 tons. In the future, we will continue to strive for the optimization of heat integration and is planned to be executed between 2021 and 2022. The preliminary estimated aim is to save 10,138 tons of steam usage per year, equivalent to a reduction in carbon emissions of 3,058 tons.



Heat Exchanger at the Allyl Alcohol Factory

Analysis of DCC's Cooling Tower Hydraulic Balance

The joint review on the cooling water demand for the process conducted by the public unit and process unit found that some cooling pump heads were too high, causing a waste of electricity. Based on these findings, senior management began to promote hydraulic analysis and measurement adjustment from 2020. The number of water towers (a total of 37 cooling towers) was calculated by each factory in accordance with the table prepared by Taipei Head office to confirm the optimal demand point of operating conditions. If the operating conditions were much higher than the minimum demand after analysis, immediate improvement must be made to achieve energy saving of the cooling water system.

After adjustment, the average energy efficiency can reach 15%-40%, saving considerable amount of electricity. Taking CCDSG as an example, after flow allocation calculation and equipment adjustment, stopping one pump reduced annual electricity consumption by approximately 5.1 GWh, equivalent to a reduction in carbon emissions of 2,100 tons. In 2021, we will continue to optimize the cooling water system where we expect to reduce electricity consumption by another 3.1 GWh, equivalent to a reduction of carbon emissions of 1,276 tons.

► DCC 2018-2020 Energy Consumption Statistics

Unit: Gigajoule (GJ)

Source of Energy		2018	2019	2020
Fossil fuels	Diesel	32,673	35,572	28,953
	Natural gas	1,308,919	1,157,970	1,621,321
	Heavy oil/fuel oil	345,372	276,625	222,157
	Coal	2,279,707	1,139,438	N/A
	Externally purchased power	3,297,604	3,123,976	3,017,891
	Externally purchased steam	11,950,723	10,729,371	12,845,515
	Power sold to external parties	N/A	N/A	N/A
	Steam sold to external parties	60,340	58,955	47,200
Renewable energy	Renewable energy consumption (including wind energy, solar energy, biomass, etc.)	N/A	N/A	N/A
Total Energy Consumption		19,154,658	16,403,997	17,688,637
Self-generated energy	Self-generated steam	2,093,708	1,279,299	800,421
	Self-generated power	N/A	N/A	N/A

Note 1: For detailed information on each factory for 2020, please refer to Appendix B.

Note 2: Total energy consumption = diesel + natural gas + heavy oil/fuel oil + coal + externally purchased power + purchased steam - sold electricity - sold steam.

Note 3: Heat value conversion factors are based on those released by each location.

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2.4 Water Resources Management




With water scarcity and environmental damage being the most common challenges around the world, at DCC, we do our utmost to minimize environmental impact of our daily operations and processes as a way to show our dedication to environmental protection. In terms of water resources, we have implemented multiple projects: rainwater recycling, recovered water utilization, enforced process water-saving, and strengthened the elimination of pollutants from wastewater. By improving water efficiency, we achieve our sustainable development goals.

2.4.1 Water Resource Risk Management

At DCC, we use WRI Aqueduct Water Risk Atlas to identify potential water risks using the base period (1960-2014). The results show “low level” (less than 10%) for our factories in Taiwan, DCCM, and CCDSG; and “high level” for CCDPJ (at 40%-80%), accounting for 9.3%, 17%, and 7.9% of the water withdrawal, water discharge and water consumption, respectively. Details are as follows. No water scarcity occurred in operating bases in 2020, and all factories continue to promote water-saving projects through internal water consumption management to prevent the possible impact in the event of water scarcity.

► Water Source Stress Area (high risk of water scarcity) Information

Unit: million liters

Item			DCC	CCDPJ (water source stress area)
 Water Withdrawal	Total Water Withdrawal	Surface water (total volume) + third-party water (total volume)	9,376	872
	Water withdrawal volume according to fresh water and other water divisions	Freshwater (≤ 1,000 mg/L total dissolved solids)	9,376	872
		Other water (>1,000 mg/L total dissolved solids)	0	0
 Water Discharge	Water Discharge by Endpoint	Surface Water	10	N/A
		Groundwater	N/A	N/A
		Seawater	138	N/A
		Third-party Water	1,333	252
	Total Water Discharge	Surface water + groundwater + seawater + third-party Water	1,481	252
	Water discharge volume according to fresh water and other water divisions	Freshwater (≤ 1,000 mg/L total dissolved solids)	1,481	252
Other water (>1,000 mg/L total dissolved solids)		N/A	N/A	
 Water Consumption	Total Water Consumption		7,895	620

Note 1: For water withdrawal data, please refer to 2.4.2 Water Consumption Management.

Note 2: For water discharge data, please refer to 2.4.3 Wastewater Management.

Note 3: For water consumption, please refer to 2.4.3 Wastewater Management.

◆ Internal Management

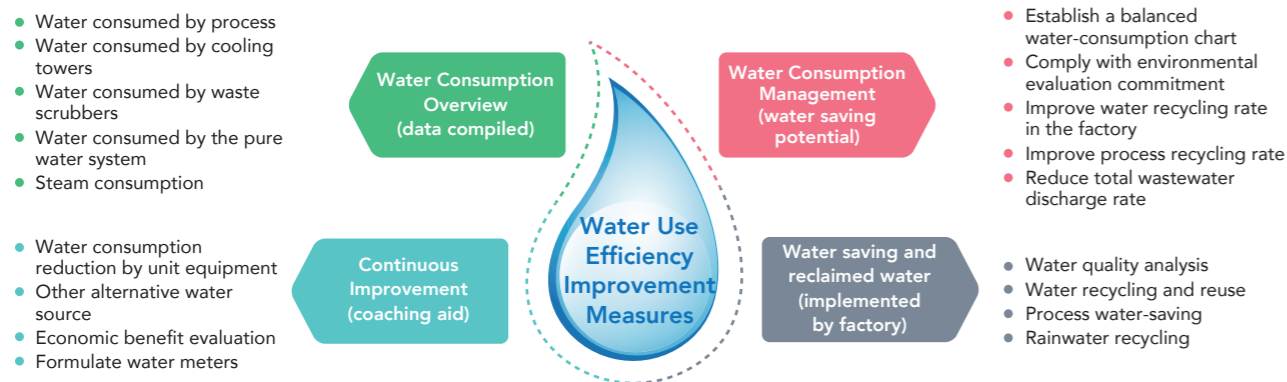
At DCC, we promote water recycling and constantly refine our water-saving plans according to actual operations. We continue to make improvements to public equipment (e.g. cooling water system, air condition, air compressor) or rotating equipment (e.g. pump, wind turbine, compressor, mixer, conveyor system) to improve water consumption efficiency as a means to reduce tap water consumption. At the same time, we also implement rainwater recycling and storage measures to cherish the water resources provided by nature. At CCDPJ, not only rainwater recycling and storage measures are facilitated, steam condensate from the main factory is also recycled into a primary pure water tank, which is then purified and reused in the manufacturing process. By doing this, our precious water resources are continuously recycled and reused.

2.4.2 Water Consumption Management

DCC's factories all have water pollution control permits (documents), and abide by the local law and standards. In 2020, there were no violations of water pollution prevention regulation and standards. At DCC, we take water management issues seriously, we continue to improve the consumption efficiency of water resources in our daily business activities. Our head office began to organize energy conservation and carbon reduction promotion operations in 2018 and has set a target of 3% reduction in the original unit consumption of water for each factory per year. Through improving water consumption efficiency measures, we hope to effectively utilize water resources in terms of management, technical improvement and data collection aspects. Compared to 2019, the original unit consumption of water reduced by 3.2% in 2020.

Note: Original unit consumption of water (million liters/million liters) = water consumption (million liters)/annual production (million liters)

► Water Use Efficiency Improvement Strategy Chart



To address potential water scarcity risks, we have set short-term, medium-term and long-term targets for water resource management, while also enforcing the Company's water consumption efficiency measures, and continuing to optimize the consumption efficiency of water resources:

► Water Resource Management Targets

2016-2020 Short-term Target

Completed the establishment of the "public version of the correct water balance chart and water recycling performance inventory" and regularly reported the "management indicators for the evaluation of water recycling performance and water conservation of the Group's factories"

2021-2029 Medium-to Long-term Target

Each factory is required to reduce the original unit consumption of water products by 3% per year



◆ Comprehensive Promotion of Rainwater Recycling in Factories

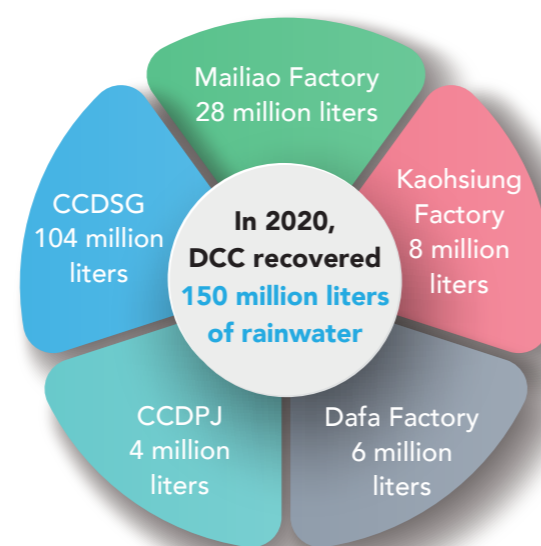
As rainwater is the most precious gift from nature to mankind, DCC is doing what it can to implement rainwater recycling. We not only reduce the use of tap water and raw water, we also demonstrate the importance of keep the factory clean. Furthermore, all our employees are equipped with the environmental management habits of 7S and incorporate the prevention of leaks and separation of rainwater and sewage tasks into their daily work, enabling the recycling of high-quality rainwater.

2020 has been the most fruitful year for DCC in terms of its rainwater recycling performance. Moreover, DCC's factories have also been implementing rainwater recycling with the guidance of our top management. In 2020, a total of 150 million liters of rainwater was recycled.

CCDSG: Rainwater Recycling System

Due to the high volume of rainwater, CCDSG has designed a rainwater recycling system to recycle the clean rainwater of the entire factory to be reused into cooling towers to reduce industrial water consumption. This project has recycled approximately 104 million liters of rainwater in 2020.

► 2020 DCC Rainwater Recycling Performance



DCCM: Completed the establishment of a rainwater collector

DCCM invested in rainwater collector covering nearly 40% of the factory area. 0.6 million liters of rainwater was recycled in 2020 and 5.6 million liters of rainwater is expected to be recycled each year in the future.

DCCJS: Establishment of a Rainwater Interceptor for Reuse in the Cooling Tower

In March 2021, DCCJS began to build a rainwater interceptor for the recycled water to be reused in the cooling tower. The rainwater interceptor will be put into use upon its completion in the middle of 2021. The rainwater recycling area of the factory is approximately 181,841 square meters, and approximately 50 million liters of rainwater is estimated to be recycled annually.

► 2018-2020 Water Withdrawal Statistics

Unit: million liters

Item	2018	2019	2020	Item	2018	2019	2020
Tap water	6,404	5,461	5,251	Rainwater	5	57	150
Reservoir water	N/A	N/A	N/A	Externally Purchased Steam Condensate	487	654	845
Well water	N/A	N/A	N/A	Externally Purchased Pure Water	1,017	849	818
River water	3,482	3,021	2,312	Pure Water Sold to External Parties(-)	N/A	N/A	N/A
Groundwater	N/A	N/A	N/A	Total Water Withdrawal	11,395	10,042	9,376

Note 1: For detailed information on each factory for 2020, please refer to Appendix B.

Note 2: DCC did not use reservoir water, well water, groundwater or pure water externally sold.

Note 3: Total water withdrawal = tap water + river water + rainwater + externally purchased steam condensate + externally purchased pure water - Pure Water Sold to External Parties.

Note 4: According to GRI 303-3 (2018 edition), the total water withdrawal must include: surface water, groundwater, seawater, produced water and third-party water; among these, surface refers to collected or harvested rainwater. The calculation methods and results of the total water withdrawal for 2018 and 2019 are reexamined.

► 2018-2020 DCC Water Recycling Statistics

Unit: million liters

Item	2018	2019	2020	Item	2018	2019	2020
Steam Condensate	3,276	3,053	2,813	Process circulation	10,629	7,596	12,652
Cooling Tower	106	85	61	Total Recycled Water	17,279	13,595	18,724
Boiler	465	393	847	Total Recycled Water as a Percentage of the Total Water Withdrawal (%)	152%	135%	200%
Water reused by process	2,632	2,211	2,351	Number of Times a Drop of Water is Reused	2.5	2.4	3.0
Wastewater plant	171	257	N/A				

Note 1: For detailed information on each factory for 2020, please refer to Appendix B.

Note 2: Total recycled water = steam condensate + cooling tower + boiler + water reused by process + wastewater plant + process circulation.

Note 3: Number of times a drop of water is reused = (total recycled water + total water withdrawn)/total water withdrawn.

Note 4: According to GRI 303-3 (2018 edition), the total water withdrawal must include: surface water, groundwater, seawater, produced water and third-party water; among these, surface refers to collected or harvested rainwater. The calculation methods and results of the total recycled water as a percentage of the total water withdrawal (%) and Number of times a drop of water is reused for 2018 and 2019 are reexamined.



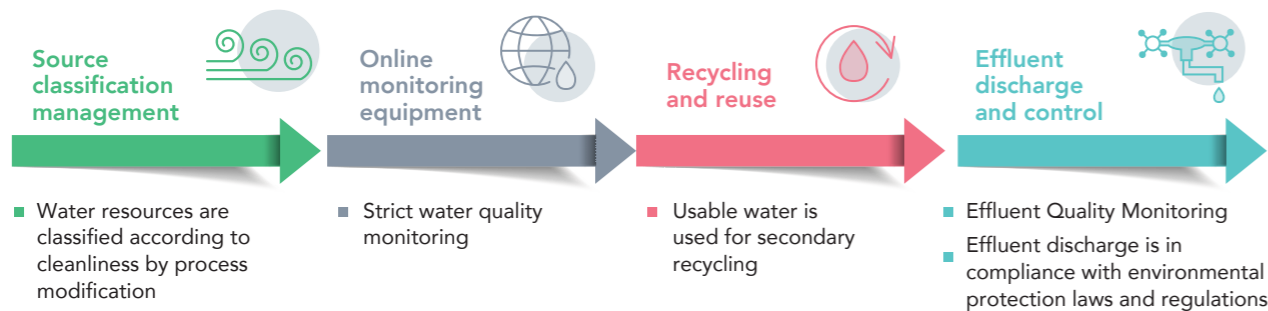
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2.4.3 Wastewater Management

As a means of increasing the reuse rate of water resources, DCC's factory seeks opportunities through the establishment of a water balance chart.

◆ Wastewater Treatment Process

In each factory, there is a sewage treatment plant to treat wastewater generated by production processes using biological and chemical methods. After wastewater has been treated, it meets the discharge standards of environmental protection regulations.



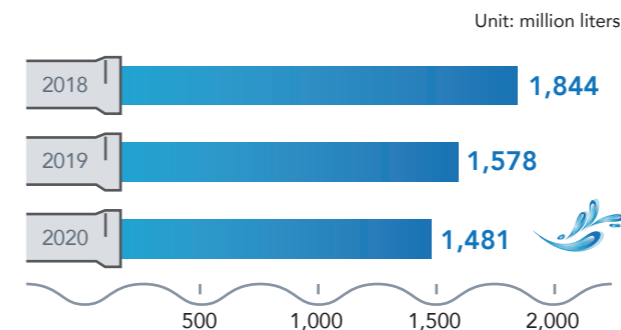
◆ Effluent Quality Monitoring

There are comprehensive wastewater pollution prevention measures in place within DCC to avoid wastewater generated by processes that impact the environment. To strengthen wastewater monitoring and proactive management, an automatic monitoring and real-time notification system has been set up at the outlet of effluent in each factory. The key monitoring points on effluent are chemical oxygen demand (COD), conductivity, suspended solids (SS), temperature, and pH scale. For irregular data, DCC enforces the automation electronic notification procedure, strictly requiring each factory to send back at least 90% of effective monthly monitoring records. Factories that do not reach the target are announced subject to a review. In 2020, effluent monitoring of each factory all met the Effluent Standards. The total wastewater was reduced by 363 million liters over 2018, a reduction rate of 19.7%.

► Schematic diagram of Effluent Quality Monitoring System

各廠廢水狀態					
正常					
監測項目及限值	一般監測項目				
	化學需氧量(COD) (<480mg/L)	導電度 (ms/cm)	懸浮固體(SS) (<400mg/L)	溫度 (N/A)	pH值 (5~9)
監測顯示數據	29.4	0.4	19	26	6.6

2018-2020 Wastewater Statistics
(Total Wastewater Discharged to the Outside of the Factory)



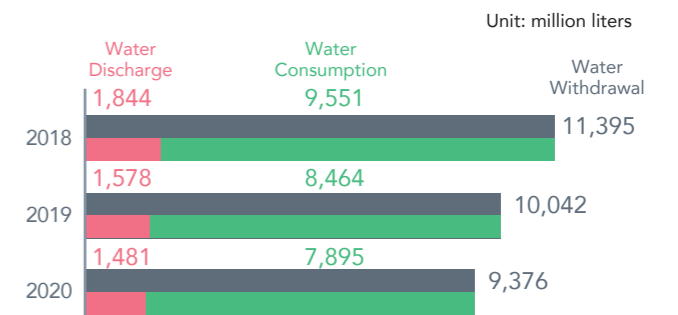
Note 1: For detailed information on each factory for 2020, please refer to Appendix B.

Note 2: Wastewater that meets the discharge standards: wastewater produced by Dafa Factory, Kaohsiung Factory and overseas factories is discharged to the wastewater treatment plants in their respective industrial parks, while wastewater produced by the Mailiao Plant is discharged to the Taiwan Strait.



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DCC 2018-2020 Water Consumption Statistics



Note 1: Water withdrawal - water discharge = water consumption.

Note 2: According to GRI 303-3 (2018 edition), the total water withdrawal must include: surface water, groundwater, seawater, produced water and water from third parties; among these, surface refers to collected or harvested rainwater. As the total water withdrawal has included collected or harvested water, the calculation methods and results of the water withdrawal and water consumption for 2018 and 2019 are reexamined.

2.5 Discharge Management

2.5.1 Air Pollutant Emission Management

Management Policy for "Air Pollutant Emission Management"

Significance of Material Issues	Being able to provide a healthy living environment with clean and fresh air is the motivation for us to keep on exercising the improvement of air pollution.
Policy and Commitment	We keep a close eye on domestic and international regulatory requirements and coupled with autonomous monitoring and management use them as our basic standards for air pollutant emission improvement.
Target	In accordance with the principle of the best available control technology (BACT), we review pollution improvement and reduction on a rolling basis in line with the characteristics of the process. We also provide regular education to our employees to ensure the best performance of equipment and systems. <ul style="list-style-type: none"> Short-term Zero odor dispersion from the process Medium-term Reduce TSP, SOx, NOx, and VOCs by 5-10% from 2017 Long-term Zero failure of prevention equipment and aim for zero emissions from flares.
Action Plan	<ul style="list-style-type: none"> Formulate and review technological feasibility and regulatory compliance. Convene and set up project teams in each factory to promote and implement projects. Review and follow up the improvement progress and effectiveness of projects
2020 Implementation Result	We have optimized and refined our process pollution management. The concentration of air pollutant emissions is all in compliance with the regulatory standards. The overall emissions have reduced and the odor emissions have been effectively managed, reducing public complaints.
Communication/Grievance Mechanism	Communicate or file a grievance via customer hotline, DCC website - Contact Us, or email.

It is our ongoing commitment to reduce air pollutant emissions. In addition to enforcing strict emission control to meet regulatory standards, we also review emission reduction and maintain and upgrade prevention equipment on a rolling basis. At present, our performance is on par with best available control technology (BACT); DCC's air pollution improvement performance is described as follows:

1. Strengthen the Control of Hazardous Air Pollutants:

In response to EPA's "Hazardous Air Pollutant Emissions Standards for Stationary Sources", we have completed an audit of an inventory on hazardous air pollutants (HAPs) at all factories. Moreover, 3-4 employees from each factory (a total of 9-12 employees in the Company) participate in the health risk evaluation dedicated personnel education and training. These employees have also obtained a license meeting the requirements stipulated in the Regulations on Establishment and Administration of "Environmental Dedicated Units or Personnel" and the "List of Public and Private Places Which Should be Set Up for Air Pollution Prevention Units or Personnel and Health Risk Assessment Personnel". Furthermore, our factories in Taiwan have completed the establishment of a hazardous air pollutants emission inventory. In the future, emission risks of each factory's HAPs will be added and tested on a rolling basis, and process improvement and end-of-pipe control will be conducted for pollution sources with higher risks.

2. Air Pollutant Emission Reduction:

(1) TSP and NOx reduction:

Mailiao Factory continues to add denitrification systems and scrubbers to process gas (liquid) boilers to reduce NOx to water-soluble NOx. When combined with a scrubber, NOx emission concentration can reduce to less than 30 ppm and TSP by 10%. This meets the tightened comprehensive boiler emission standards enforced by the EPA on July 1, 2020.



Denitrification System



Scrubber

(2) VOCs reduction: In order to reduce the dispersion of VOCs during the product loading process, Mailiao Factory switched its shipping method from tanker transportation to pipeline transportation, aiming to reduce pollution emissions (annual reduction of TSP: 288kg, SOx: 2.27kg, NOx: 2,658.82kg and VOCs: 98.91 kg) generated during shipping, while at the same time preventing the generation of odors.



Tanker Transportation (before improvement)



Pipeline Transportation (after improvement)

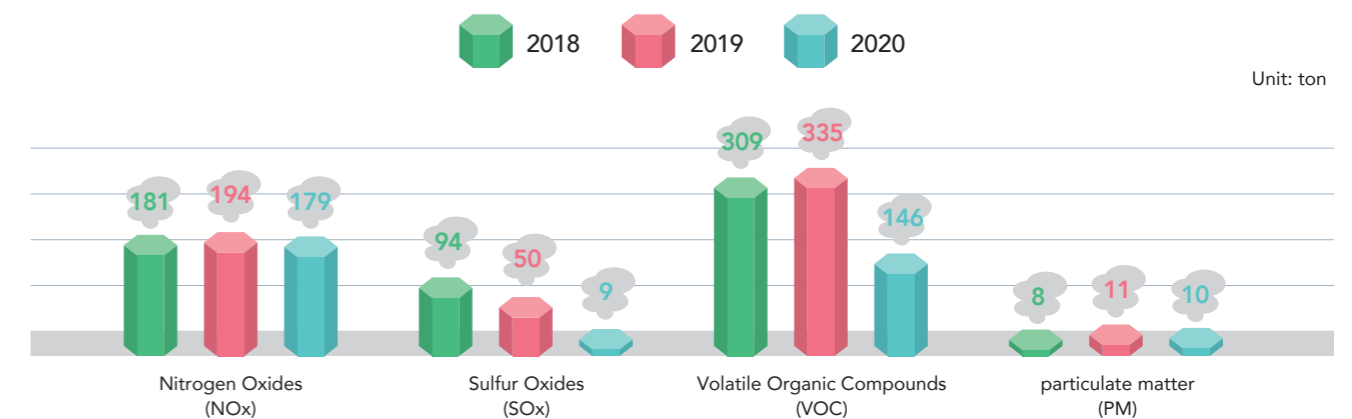
3. Implement Equipment Component Autonomous Management:

In terms of equipment component autonomous management - based on this responsibility, Dafa Factory must carry out inspections on components which are difficult to detect leakages using GasFind IR. Among these inspections, the results are to be uploaded on the same day of the process. Through the form, factories with leakage concentration exceeding the internal control value are managed to track the improvement of equipment component maintenance, thus effectively controlling and reducing the leakage of equipment components.

4. Legal Compliance and Review:

The number of environmental violations for DCC in 2020 reduced by one from 2019, but the fines imposed increased by NT\$475,000. The increase was due to the leakage concentration of equipment components exceeding the concentration limit. According to the revised "Penalty for Violation of the Air Pollution Control Law by Stationary Sources in Public and Private Establishments" released by the EPA on June 10, 2020, the calculation factor and the amount of fines were raised, resulting in the increase in the fine of equipment components from NT\$100,000 to NT\$350,000-NT\$650,000. The Company will continue with the autonomous management measures and strengthen internal audits and inspections on processes and equipment components, striving for less environmental violations and fines year by year.

► 2018-2020 Air emissions of the following pollutants



Note 1: Wrong pollutant emission input for DCC in 2019, but corrected this year.

Note 2: For detailed information on each factory for 2020, please refer to Appendix B.



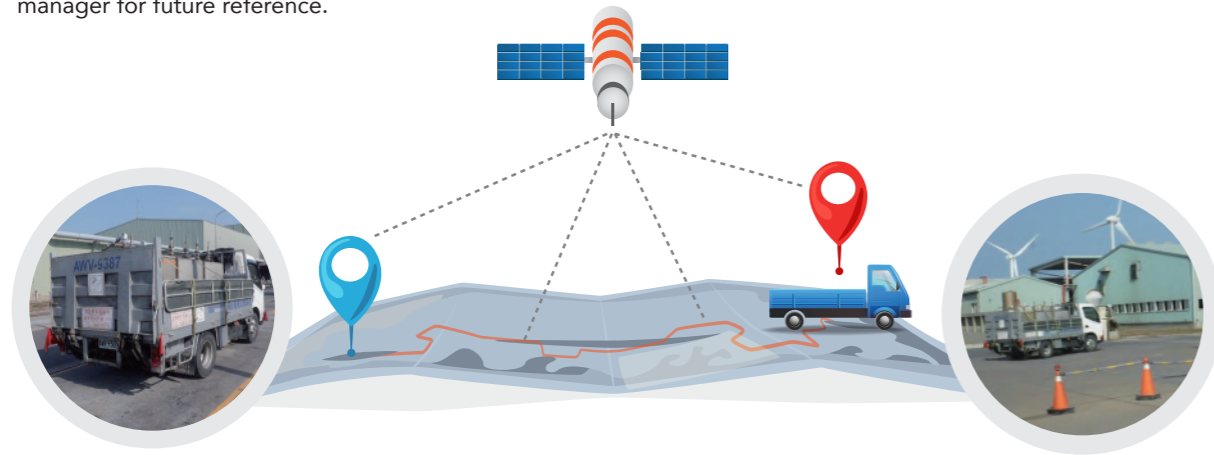
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2.5.2 Waste Management

DCC's main strategy for tackling waste management is to reduce industrial waste and utilize sustainable resources. As we continue to develop waste recycling technology, we must solve the waste treatment issue and increase resource utilization efficiency. We are also committed to improving the operation and technology of processes by pursuing the use of renewable or low polluting raw materials when manufacturing our products. By making this effort, we hope to reduce waste generation, while also reducing waste treatment costs, achieving a spirit of sustainability.


DCC Mailiao Factory: Strict Control of Outsourced Treatment Vendors

In order to fulfill the responsibility of the production source and put an end to illegal disposal, the Mailiao Factory performs stringent measures on outsourced vendors to dispose of acrolein. During the transportation of waste acrolein from the factory to the waste treatment plant, the Safety and Health Department appoints colleagues to follow the vehicle for the entire route. A report and vehicle GPS data are subject to submission to the factory manager for future reference.



► DCC 2018-2020 Waste Statistics

Unit: ton

	Item / Year	2018	2019	2020
 General Business Waste	Total General Business Waste	2,286	2,681	2,251
	Total Recycled General Business Waste	810	1,065	1,040
	Total Incinerated General Business Waste	695	932	787
	Total Buried General Business Waste	537	640	335
	Total General Business Waste Treated Through Other Methods	245	43	87
	General Waste Recycling Rate (%)	35%	40%	46%

	Item / Year	2018	2019	2020
 Hazardous Business Waste	Total Hazardous Business Waste	18,978	13,487	9,923
	Total Recycled Hazardous Business Waste	12,789	9,393	876
	Total Incinerated Hazardous General Business Waste	434	720	8,835
	Total Buried Hazardous Business Waste	322	353	212
	Total Hazardous Business Waste Treated Through Other Methods	5,433	3,021	N/A
	Hazardous Business Waste Recovery Rate (%)	67%	70%	9%
 Recycled Waste	Recycled Waste Generation	13,599	10,458	1,916
	Non-recycled Waste Generation	7,665	5,710	10,256
	Total Waste Generation	21,264	16,168	12,172
	Waste Recycling Rate (%)	64%	65%	16%

Note 1: Total General Business Waste Treated Through Other Methods: Heat treatment, solidification treatment, physical treatment, chemical treatment

Note 2: Total Hazardous Business Waste Treated Through Other Methods: Heat treatment and high-temperature wet oxidation treatment.

Note 3: For detailed information on each factory for 2020, please refer to Appendix B.

Note 4: As DCCJS halted the use of coal-burning boilers in 2020, the amount of incinerator bottom ash generated has been greatly reduced, resulting in a more significant decrease in the waste recycling rate due to incinerator bottom ash being recycled.



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Appendix



3 CHAPTER

Integrity



- 3.1 Corporate Governance and Sustainable Management
- 3.2 Sustainable Supply Chain Management
- 3.3 Stakeholder Communication
- 3.4 2020 Material Sustainability Topics

Key Performance



Received Best Trade Contribution Award

Received 2020 Best Trade Contribution Award from the Ministry of Economic Affairs



Over 98.2% training rate

The entire Group's legal compliance and anti-corruption education and training: training rate: over 98.2% and policy communication rate 100%



Received EcoVadis silver medal

Received EcoVadis silver medal (ranked in the top 14% in the industry)



Promotion of the New Supplier Code of Conduct

Promotion of the New Supplier Code of Conduct: Completed 100% signature rate for suppliers in Taiwan



Promotion of the Declaration of Conflict-free Minerals

Promotion of the Declaration of Conflict-free Minerals - Completed 100% signature rate



CSR risks of suppliers assessed

Initiated the CSR risk assessment mechanism for suppliers: 81% of major raw material suppliers are identified low-risk; high-risk suppliers are prioritized for annual on-site assessment

3.1 Corporate Governance and Sustainable Management

At DCC, we insist on operational transparency and have established a board of directors in accordance with the "Company Act" and the "Securities and Exchange Act". We also attach importance to shareholders' equity and employee benefits. For some time now, the Board of Directors has continued to improve its corporate governance system and carried out self-assessments as a means to raise the awareness of the employee's legal compliance and supervision and management of subsidiaries. In doing so, we are also able to deepen the Group's corporate social responsibilities and emphasize the concept of sustainable development as well as maximizing the interests of our stakeholders. On par with the Group's three core principles of corporate governance, environmental protection and social relationship, we aim to create a better society with our quality products and services.

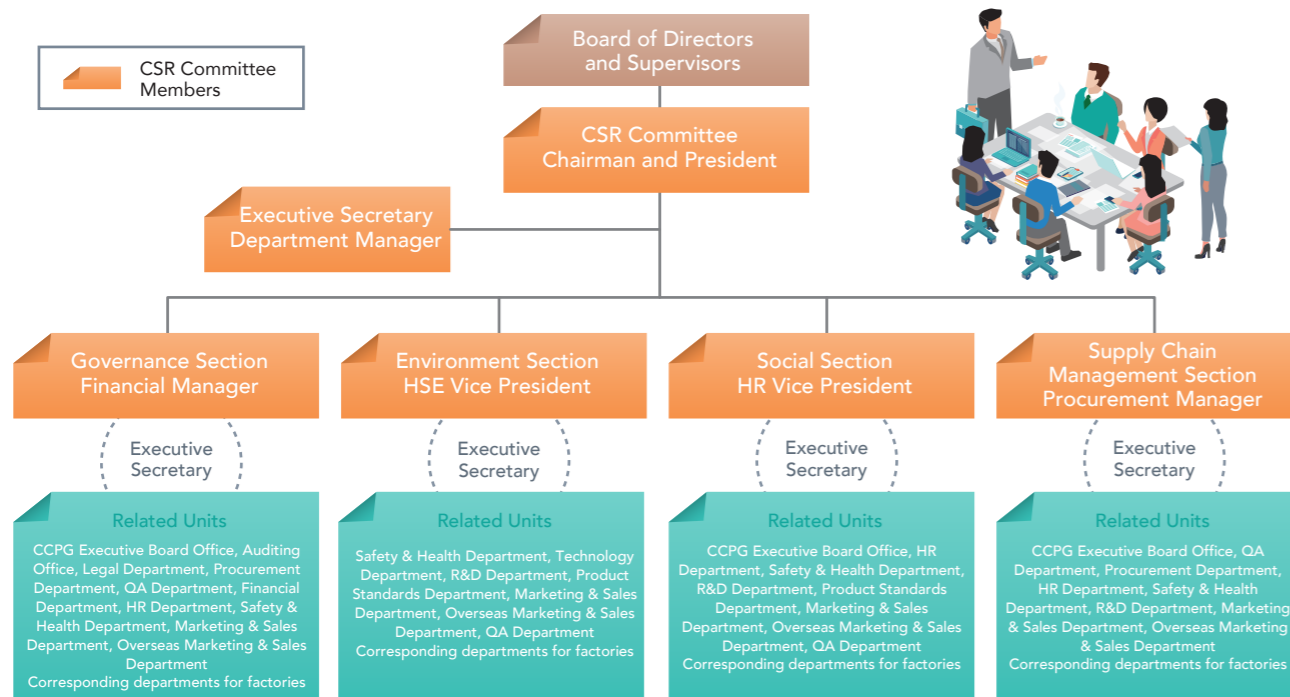
3.1.1 Sustainability Strategy

◆ CSR Governance and Management Organization

DCC established the CSR Committee in 2019 and in accordance with the organizational structure, the Chairman serves as Committee Chairman while the President serves as the Committee Vice Chairmen, followed by Executive Secretariat, Governance Team, Social Team, Environmental Team, and Supply Chain Management Team. The Executive Director of the Executive Secretariat and all team leaders are held by heads of responsible departments and they are also members of the Committee.

The Executive Secretariat provides support to each cooperating department and conducts issue integration with representatives of each factory. The results of sustainable performance and the results of communication with stakeholders are reported to the CSR Committee and stakeholders on a quarterly basis.

► DCC's CSR Committee Structure



In a bid to implement the sustainability strategy, the CSR Committee has established short-term and mid- to long-term sustainable development objectives and action plans alongside each team. Systematic plans are implemented by each responsible unit who in return report back the risk issues of its related areas. The person in charge of each CSR team leads and supervises the implementation status and reports back to the Executive Secretariat which is then reported to the chairman and the president.

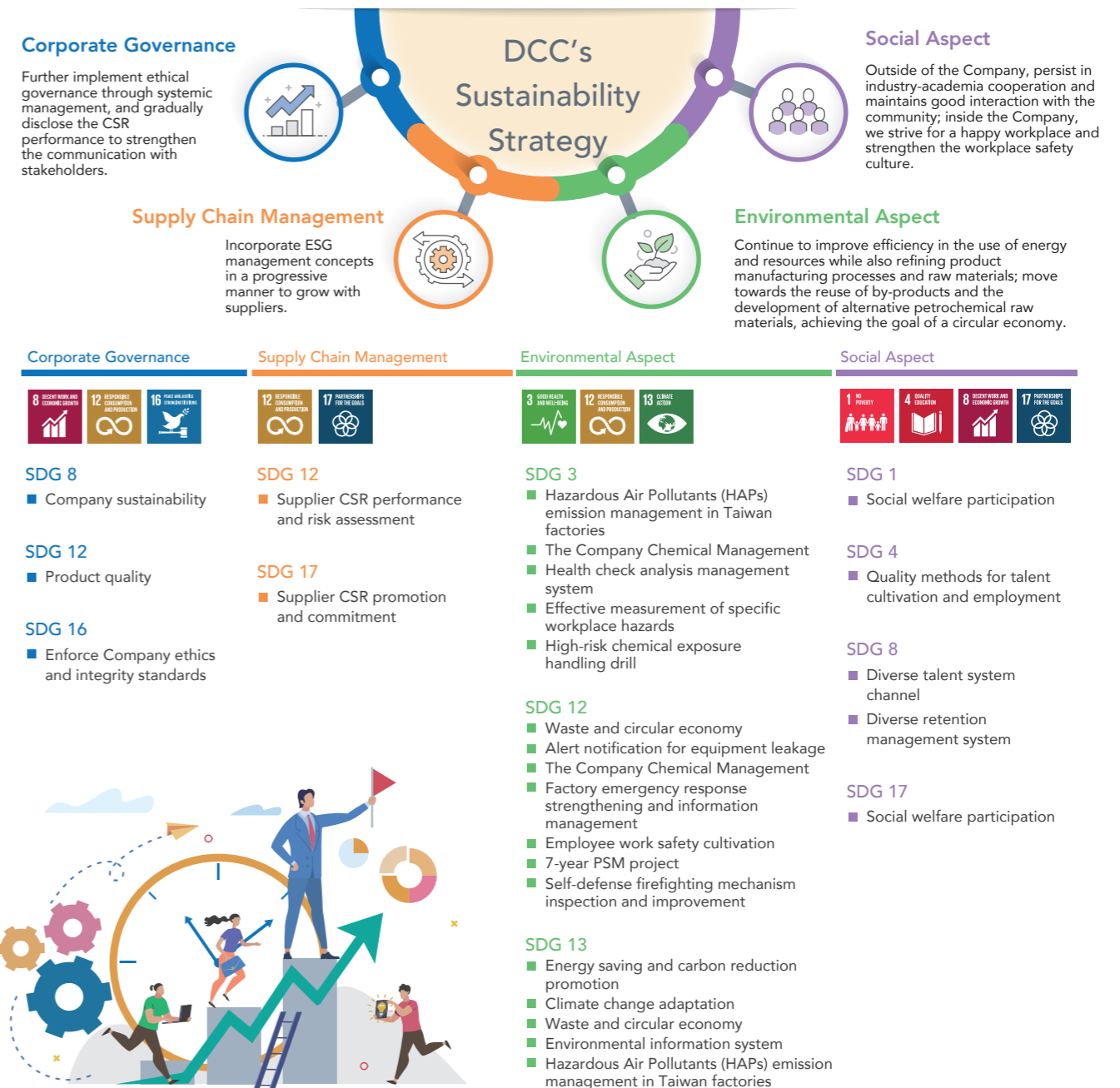
In 2020
a total of **4** CSR team meetings
1 CSR Committee meetings were held

◆ Sustainability Strategy to Respond to the UN's Sustainable Development Goals (SDGs)




As a part of the Group, the foundation of DCC has been based on fulfilling its CSR responsibilities since its establishment. As we pursue profitable growth and future sustainable management, CSR has been rooted down in the management philosophy and shaped our corporate culture. We are committed to developing sustainable strategies based on our core business, striving for the prosperity of the Group, the environment and society.

Meanwhile, we understand that combining our strategic goals of sustainability and SDGs require the devotion and support of the organization. 2020 Analyses of tiered phases based on the following steps:



DCC has always made efforts in sustainable development, including the following 8 goals. By helping all employees to understand SDGs, DCC are able to inspire them to help society using their full capabilities. At the same time, we adhere to the core concept of "share the sustainable values with society", and grow together with stakeholders to satisfy the needs and expectations society holds on DCC, further expanding our positive influence.



As part of DCC, we follow the Group's value's to jointly establish goals and action plans for sustainable development; please see the following:

Aspect	Strategy	2020 Achievement Status
 Governance	Enforce Group ethics and integrity standards	1. Over 98.2% of the entire company received complete legal compliance and anti-corruption training. 2. Released the Group's Anti-bribery and Anti-corruption Pledge
	Co-exist and co-prosper with stakeholders	Collected 245 questionnaires from senior managers, and 719 questionnaires from stakeholders in Taiwan and abroad; and disclosed 7 material topics and their related performances in the 2020 Sustainable report
	Product quality	1. Integrated and improved the quality systems in factories, including specification amendment system and concession receiving system 2. Trained 62 new ISO 9001:2015 internal auditors 3. Completed the non-conformity management audit in each factory in Taiwan 4. Set up 3 courses including the quality and statistics, seven basic tools of quality, design of experiments digital courses
	Group's sustainable development	Deepened the linkage between SDGs and CCPG's core business to promote sustainability action plans
	Corporate image	Continued to issue an annual Sustainable report to disclose ESG-related issues
 Supply chain	CSR promotion and commitment	1. Complete 100% issuance of the Supplier Code of Conduct and required signatures in the Group. 2. Formulate a policy for conflict minerals and complete the first due diligence on conflict minerals for metals used in the process.
	CSR risk assessment management	Completed 14% on-site audits on high-risk suppliers, 1 in total
 Environmental Aspect	Group energy saving and carbon reduction promotion	1. Completed multiple water conservation and energy saving projects; for more details, please refer to 2.3.2 Energy Saving and Carbon Reduction Actions and 2.4.2 Water Management 2. All factories in Taiwan, DCCM, and DCCJS introduced the ISO 50001 energy Management system 3. The entire Group collected and recovered 0.15 million tons of rainwater; wastewater emissions reduced by 6.1% 4. Set a target to reduce water, electricity, and steam consumption by 3% per year
	Climate change adaptation	Identified climate-related risk opportunities and are included into strategic planning
	Waste and circular economy	Reduced the output of flue-gas desulfurization (FDG) and sewage sludge by 15%
	Environmental information system	Established an iVOCs online real-time monitoring platform to ascertain the real status of process gas detector alarms, with a completion rate of 55%

Short-term Target(2021-2022)	Medium- to Long-term Targets
1. Issue the "Operating Procedures for Business Ethics Inspection" and "Integrity Clause for Chang Chun Group & Related Enterprises" to improve the overall structure 2. Issue the "Operating Procedures for Labor Rights and Business Ethics Risk Management" to adopt countermeasures or control measures for potential risks	Perform internal audits in accordance with the "Operating Procedures for Business Ethics Inspection" and submit the audit result to the Board of Directors
Achieve effective stakeholder communication through third-party assurance standards (ISAE 3000, AA 1000) to strengthen data credibility	Establish diverse and systemic communication channels to interact with stakeholders and explain their concerned issues
1. Integrate the Group's quality operational systems 2. Strengthen the quality of general knowledge training, with 150 employees expected to complete training 3. Introduce automated management systems	1. Enhance the statistical technology for manufacturing process control and quality management 2. Focus on quality change and product quality process improvement 3. Introduce automated analysis equipment 4. Establish knowledge base
Introduce SASB and disclose material sustainability information on finances	Evaluate ESG implementation performances and management policies on once annual basis
Set up a ESG website to improve the effectiveness of external communication	Continue to refine sustainable strategies and plans
1. 100% of Code of Conduct with foreign suppliers in Taiwan and overseas suppliers 2. Perform an investigation prior to procurement to ensure it does not involve conflict minerals and enforce due diligence	Set up a new supplier management information platform which is expected to be completed by 2025 to effectively unify supplier management results
1. Complete 100% on-site audits on high-risk suppliers 2. Redefine major raw material suppliers and review risk evaluation elements [quality/safety/environment protection/human rights/society] to integrate the existing supplier assessment system. 3. Establish procedures and mechanisms for on-site evaluation of contractors	Practice supplier CSR performance management and risk assessment
1. Evaluate the degree of energy consumption of motors in factories 2. Replace cooling tower fans with energy-saving blades 3. Continue to make plans to reduce consumption; proactively reach the target to reduce water, electricity and steam consumption by 3% per year	Set a GHG reduction target of 7.05% by 2025 over 2018
1. Promote CDP questionnaires and carbon management systems 2. Promote the carbon reduction path initiated by the Industrial Development Bureau	Construct a carbon management system and increase the CDP questionnaire performance
1. Collect dust and ash for resource recycling 2. Match at least one FDG reuse sector	Construct a waste statistics platform combined with CSR data collection
Integrate CEMS data of cogeneration plants and flares as well real-time notification to ensure that emission concentration and transmission efficiency meet regulatory requirements	Optimize the Group's environmental information system for legal compliance

Aspect	Strategy	2020 Achievement Status
 Environmental Aspect	Hazardous Air Pollutants (HAPs) emission management in Taiwan factories	1. 100% of identification rate for HAPs emissions and fugitive emissions from all manufacturing processes 2. Completed 1 HAPs perimeter sampling in each factory before June and December respectively
	Alert notification for equipment leakage	(New plans for 2021)
	Group chemical management	1. Registered 4 existing chemical substance standards 2. Built more than 300 material safety data table 3. Over 20 products with the GHS label 4. Pre-registered over 50 substances with Turkey REACH
	Factory emergency response strengthening and information management	1. 55 transportation contractors completed emergency response training 2. DCC emergency response personnel completed 100% internal training 3. Rehearsed the Safety Production Manual
	Employee work safety cultivation	1. 47% reduction in workplace incidents in 2020 over 2019 2. Promoted the ISO 45001 occupational health & safety management system
	7-year PSM project	1. Tier 1 5 process safety incidents 2. Implemented the Safety Production Manual on all employees regarding chemical substance hazards (SDS)
	Self-defense firefighting mechanism inspection and improvement	(New plans for 2021)
	Health check analysis management system	The rate for importing the employee health examination data reached 100%
	Effective measurement of specific workplace hazards	100% data implemented by each factory in accordance with the test specifications
 Social Aspect	High-risk chemical exposure handling drill	1. Complete inventory on the usage condition for high-risk chemicals 2. Complete training materials and drill scripts for handling hazardous chemical exposure
	Diverse talent system channel	1. Annual planned manpower demand replenishment rate reached 100%; recruitment replenishment rate for temporary demand was 93.6% 2. Set up a recruitment website for overseas companies to integrate overseas talent resources
	Quality methods for talent cultivation and employment	1. Optimized existing education and training systems 2. Promoted 5 tiered Group education and training audit 3. Completed the production of e-film teaching materials for 25 professional courses 4. Strengthened management techniques of managers
	Diverse retention management system	1. Take part in labor union meetings held by business entities at least once a year; in 2020, a total of 3 labor union meetings were attended 2. A regular supervisory board meeting and labor-management meeting of business entities are held every 3 months to achieve a consensus and harmonious working atmosphere satisfied by employees and employers
	Social welfare participation	Took part in and sponsored a total of 64 social contribution projects in Taiwan and overseas.

Short-term Target(2021-2022)	Medium- to Long-term Targets
1. Assess HAPs in each factory for health risks 2. Reduce and manage HAPs in potential areas	Ensure HAPs emissions in Taiwan factories meet regulatory standards
1. Build automatic notification system for equipment component leakage warning, and follow-up work orders through the CMMS system 2. 20% fewer environmental fines than in 2020	Reduce environmental fines by 40% each year
Labels bearing information of toxic and chemical substances of concern	Set up a system to use fewer toxic substances and review the system from time to time to reduce operational risks
Transportation defense and professional emergency response personnel reach 120% of legal standards	Combine all DCC's information systems to achieve automatic risk warning and response activation
Less than 47 occupational accidents, making the incidence rate (IR) less than 0.33	Achieve zero disasters
Tier 1 less than 3 process safety incident	Tier 1 less than 1 process safety incident
Build 100% e-fire equipment in Taiwan factories	Less than 1 major fire accidents
The rate for building a hearing protection system in each factory exceeds 95%	Build modules with analysis functions and health management, with 100% of employees included
Completion rate of respiratory protection management plan in each factory exceeds 95%	Continue to implement effective measurement of specific workplace hazards
1. Formulate standard operating procedures and include first aid procedures into regular drills in factories 2. Training completion rate for seed instructors in Taiwan factories exceeds 95%	Regular drill rate for high-risk chemical exposure handling in all factories reaches 100%
Annual planned manpower demand replenishment rate reaches over 95%; recruitment replenishment rate for temporary demand reaches over 90%	Strengthen the key talent recruitment, analyze functional requirements and feedback to talent recruitment policy
1. Promote and assess existing education and training systems 2. Expand the construction of e-film teaching materials for professional courses, with a 5% increase target per year, reaching 26 courses by 2021. 3. Promote education and training audits in each factory and plan a acceptance mechanism for senior manager strategic management training	Complete the establishment of Group key talent pool by 2023, and establish personal development plans for key employees and organizational trainee cadre plan
1. Continue to attend labor union meetings and labor-management meetings on a regular basis 2. Carry out factory tour seminars to promote policies and explain annual training and management key points to factory managers	1. Under 5% or less turnover rate for the Group's engineers 2. Average rate of 3% or less turnover rate for the Group's employees
Organize events on par with the Company's five Axes of Social Cohesion to deepen the connection with stakeholders	Propose long-term and continuous public welfare events and integrate company resources for social investment

3.1.2 Corporate Governance

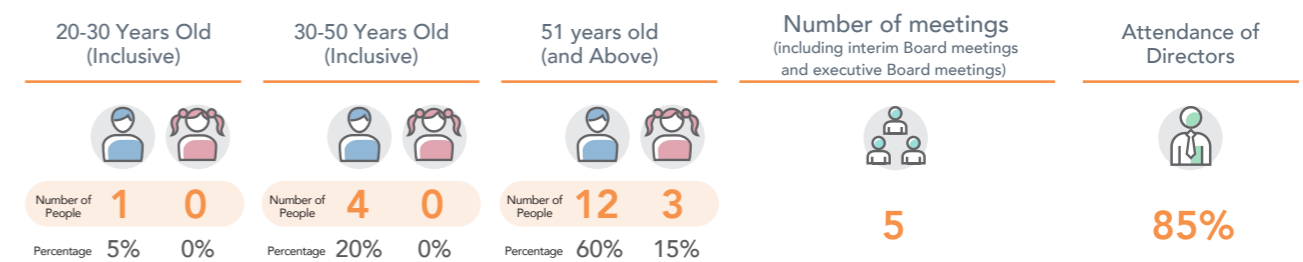
Management Approach for "Corporate Governance and Integrity"

Meaning of Material Issues	DCC is a firm believer that, by maintaining a transparent, open and efficient corporate governance mechanism and adhering to strict compliance of applicable laws and regulations, we can lead our Group to stable and sustainable growth.
Responsibility	Financial Division, Auditing Office
Policy and Commitment	As "integrity" is DCC's operating philosophy, we do our utmost to improve our corporate governance structure, strengthen the functions of the Board of Directors, while attaching great importance to legal compliance. Moreover, we have formulated a regulatory identification system and a risk management mechanism and take responsibility for our stakeholders, achieving sustainable operations.
Target	<div> <div>Short-term</div> <ul style="list-style-type: none"> Strengthen the functions of the Board of Directors and enhance transparency of information. Implement the internal control system and conduct an internal audit at the Taipei company and 7 domestic or overseas factories at least once a year, with a compliance rate over 95%. Carry out an annual business ethics risk assessment and take countermeasures or control measures for potential risks. </div> <div> <div>Long-term</div> <ul style="list-style-type: none"> Promote the Corporate Governance 3.0 - Sustainable Development Roadmap, including introducing Sustainability Accounting Standards Board (SASB) and Task Force on Climate-Related Disclosures (TCFD). Improve the functions of the Board of Directors, enhance the internal control system, deepen the corporate governance, and corporate social responsibility culture. Continue to promote Corporate Governance 3.0 and create a comprehensive ESG Ecosystem for sustainable development to strengthen our international competitiveness. </div>
Action Plan	<ul style="list-style-type: none"> Hold a Board of Directors' meeting at least once a quarter and fulfill the responsibility of guiding and monitoring the Company's strategy, major business operations, and risk control management. Perform internal audits in accordance with the internal audit measures to ensure information policy and prevent fraud. Continue to disclose financial reports and sustainability reports each year to enhance the transparency of information.
2020 Implementation Result	<ul style="list-style-type: none"> 5 Board meetings were held, with an attendance rate of 85%. An external accounting firm was entrusted to carry out an audit on the Group's inventory management. 4 suggestions for improvements were proposed for the year. For the improvement situation, please refer to 3.1.3 "Risk Management - Internal Control Risk Management". TCFD identified 8 material risk events. For the evaluation of the financial impact of risk events, management cost, associated opportunities and situational analysis, please refer to 2.2 Climate-related Change Risks and Opportunities.
Communication/Grievance Mechanism	<ul style="list-style-type: none"> Internally, the Company has the "Employee Grievance Operating Procedures"; externally, emails are available on the website: ccpgaudit@ccp.com.tw / CCPGLG@ccp.com.tw, providing employees and stakeholders outlets with a communication bridge to make complaints anonymously. The Company's grievance investigation system and whistleblower protection mechanism are implemented in accordance with the "Grievance Investigation Operating Procedures".
Performance Evaluation Methods and Results	The Auditing Office performs an internal control evaluation on an annual basis. Results are submitted to the Board of Directors, and nonconformities and recommended improvements are included in the system for control and are constantly monitored until improved.

DCC's corporate governance is effectively supervised and strategically guided by the Board of Directors of each company. The dedicated auditors perform an operational audit on each company and department to ensure there is no fraud, and that the information is correct and disclosed in a timely manner and laws and regulation are complied with in all business operations. Through the audit report and financial statements, supervisors are able to get a grasp of the Company's actual operating situation and make suggestions.

The Board of Directors will hold a meeting on a quarterly basis, or more frequently if necessary. The Board of Directors take part in the report of the President and the management team on a quarterly basis, while engaging in dialogue with members of the management team. The management team proposes company vision and strategy to the Board of Directors, who will assess the feasibility of the Company's strategy and supervise the schedule for completion.

► 2020 Composition of Directors (Including Independent Directors) and Supervisors



■ According to business needs, 5 Board meetings were held in 2020, and the following article was amended. The "Operating Procedures Governing Funds to Others"

DCC's director and supervisor election process is carried out in accordance with related laws and regulations, coupled with stringent election evaluation. Not only professional management capability is taken into account, we also emphasize the importance of personal character and leadership ability to ensure professionalism and independence, providing the most apt strategic guidance for the Company's future development. We strive for improvement of the Company's operating procedures by enhancing the Board of Directors' corporate governance and legal compliance.

The professional qualifications of the Board members and supervisors and related discussions have been disclosed in the annual report of DCC. For the corporate governance structure of DCC, please refer to the official website - Organization.



Website -
Organization

3.1.3 Risk management

As a means to effectively grasp business risks and opportunities, by following the Group's values, DCC evaluate related issues that may pose a certain degree of impact on sustainable operations. We divide risk management into six major aspects and each authorized and responsible department proposes countermeasures for high-risk issues according to their frequency and severity of occurrence. Moreover, management is conducted by following the process of Plan-Do-Check-Act (PDCA) and the effectiveness is reviewed and followed up in periodic management review meetings. To handle the impact as a result of climate change, we added the seventh aspect for risk management and introduced Task Force on Climate-Related Disclosures (TCFD) in 2019. With TCFD, we are able to identify risks in advance, aiming to continue to strengthen the Company's management system, while reducing possible operational impacts.

In recent years, more and more stakeholders are placing importance on issues such as "labor rights" and "business ethics". At the end of 2020, we proposed the "Operating Procedures for Labor Rights and Business Ethics Risk Management", which was published in March 2021 and the risk assessment on the entire Company was conducted for the first time. Countermeasures or control measures were adopted to reduce related risks.

► Seven Risk Management Aspects



◆ Legal Compliance

Management Approach for “Legal Compliance”

Meaning of Material Issues	DCC is a firm believer that, by maintaining a transparent, open and efficient corporate governance mechanism and adhering to strict compliance of applicable laws and regulations, we can lead our Group to stable and sustainable growth.
Responsibility	Legal Department
Policy and Commitment	As “integrity” is DCC’s operating philosophy, we do our utmost to improve our corporate governance structure, strengthen the functions of the Board of Directors, while attaching great importance to legal compliance. Moreover, we have formulated a regulatory identification system and a risk management mechanism and take responsibility for our stakeholders, achieving sustainable operations.
Target	<div> <div>Short-term</div> <ul style="list-style-type: none"> Zero violations of laws in relation to governance, economic and social aspects. Focus on changes in domestic and foreign laws and regulations, and deepen the employee’s awareness through annual training on legal compliance and anti-corruption. In 2021, the training ratio for the entire Company should reach over 95%. </div> <div> <div>Long-term</div> <ul style="list-style-type: none"> Cultivate a corporate culture with “integrity” as its core value and amend the Company’s regulations and codes on a regular basis. By taking this approach, we ensure all actions of the company comply with current laws and ethical standards. Our ultimate goal is zero violations of laws and regulations. </div>
Action Plan	<ul style="list-style-type: none"> Each year, we provide training on legal compliance and anti-corruption to deepen the employee’s concept of the legal system. The Legal Department pays attention on relevant laws and regulations. There is the “CCPG Regulatory Identification System” in place to identify annual potential regulatory risks through business activities.
2020 Implementation Result	<ul style="list-style-type: none"> Over 98.2% of the entire Company received legal compliance and anti-corruption training. Zero violations of laws in relation to governance, economic and social aspects. All 2 environmental violations have been addressed and improved. Please refer to 2.1 Environmental Protection Strategy and 2.5.1 Air Pollutant Emission Management. A total of 849 laws and regulations were identified, allowing all operations to be on par with the latest laws and regulations.
Communication/Grievance Mechanism	<ul style="list-style-type: none"> Internally, the Company has the “Employee Grievance Operating Procedures”; externally, emails are available on the website: ccpgaudit@ccp.com.tw / CCPGLG@ccp.com.tw, providing employees and stakeholders outlets with a communication bridge to make complaints anonymously. The Group’s grievance investigation system and whistleblower protection mechanism are implemented in accordance with the “Grievance Investigation Operating Procedures”.
Performance Evaluation Methods and Results	A Legal Compliance Committee meeting is convened by the Legal Department every six months and a legal compliance management review performed at the end of the year.

1. Establishment of the “Legal Compliance Committee”

We established the “Legal Compliance Committee” to ensure that the corporate governance and management activities of the Company meet the requirements of competent authorities. The President serves as the Chair of the Committee and members are made up of department managers, factory managers, and presidents of overseas factories. Self-assessments are conducted in accordance with the “Legal Compliance Management Regulations” and the Legal Department carries out on-site inspections alongside the audit units, and the results of audits are regularly reported to the Board of Directors. The Committee continues to follow-up the improvements made by those units with deficiencies in order to help the Company enhance the sensitivity of legal compliance. The Company have set up the “CCPG Regulatory Identification System” to identify new laws or regulations or legal changes. In 2020, a total of 849 laws and regulations were identified, allowing all operations to be on par with the latest laws and regulations.

2. Legal Compliance and Anti-corruption Education and Training

From 2017, directors/supervisors, management and non-management employees complete legal compliance and anti-corruption education and training through the e-Learning and pass a test. By providing annual legal compliance and anti-corruption education and training since 2019, over 98.2% of employees have received such training, further implementing the DCC’s ethical standards.



3. Conveying of Anti-Corruption-related Policies

For our internal employees, we use channels such as announcement boards and emails to convey information associated with anti-corruption. As of the end of 2020, we completed communication with 164 management personnel and 1,458 non-management personnel, with a communication ratio of the entire Company reaching 100%. In March 2020, we released the “CCPG Anti-bribery and Anti-corruption Commitment” on CCPG website to demonstrate our determination in the matter of bribery and corruption. We have also included such notions in our 2021 legal compliance and anti-corruption education and training to strengthen employee awareness. For external entities, we require suppliers and contractors to sign the Supplier Code of Conduct (3.2.1 Procurement Ethics) to effectively engage in anti-corruption communication.



The CCPG’s Anti-bribery and Anti-corruption Commitment

Employees or stakeholders suspected of involvement in unlawful activities or violations of the Code of Conduct may be reported (please refer to 3.3 Communication with Stakeholders) via confidential channels, including the reporting hotline and mailboxes. The Group will conduct an investigation and disciplinary action to prevent related incidents from recurring.

◆ Internal Control and Risk Management

At DCC, we have set up an Auditing Office under the Board of Directors, and “Internal Control Systems” and “Internal Audit Enforcement Rules” are formulated in line with the Company’s scales and characteristics. An independent internal audit system reviews whether the Company complies with laws and regulations, internal regulations and operating procedures. Moreover, an internal control evaluation is conducted and reported to the Board of Directors every year. Each company’s “Statement of Internal Control” is issued based on the internal control evaluation result.

On the subject of implementing the integrity management policy, in December 2020, we conducted a project and inspected whether the behavior of the Company’s employees was in compliance with internal regulations. Based on the deficiencies found in the inspection, we corrected the control process of their activities to proactively prevent any dishonest behavior, conveying the company’s policies in terms of integrity management, anti-corruption, and anti-bribery.

In 2020, the Auditing Office performed a routine audit on DCC and overseas subsidiaries, and project audits and thematic audits on internal control cycles from time to time. A total of 4 recommendations and corrective measures (statistics as follows) were proposed targeting internal control cycles, and 3 have been addressed. The remaining 1 item is in the process of being corrected and are subject to long-term improvement. However, this item has been included in the system for continuous follow up until improvement is completed.

Internal Control Cycle	Recommended Corrections	Completed Corrections	Correction in Progress
Sales Cycle	1	1	0
Production Cycle	2	1	1
Procurement Cycle	1	1	0
Financing Cycle	0	0	0
Salary Cycle	0	0	0
Property and Equipment Cycle	0	0	0
Business Ethics	1	1	0
Total	5	4	1

The Auditing Office has established an independent report mailbox - ccpgaudit@ccp.com.tw to encourage the implementation anti-corruption and anti-fraud operations. A report should be made in an event of an unlawful conduct committed by the Group’s employees is discovered by an internal employee or external related party.

◆ Financial Risk Management

The Company's financial risks are divided as follows:



◆ Quality Risk Management

In 2016, the quality risk management system was formed. From the high-risk items identified by the annual risk matrix and the material change issues raised by "departmental internal and external issues" and "stakeholders and concerned issues", the risk level of the quality management system that may affect the Company is evaluated. In doing so, countermeasures and control measures can be taken to reduce the impact on products and services and increase advantage in terms of competitiveness.

◆ Environmental and Occupational Safety and Health Risks

As DCC holds environmental sustainability protection and workplace safety and health in high regard, through the introduction of new ISO requirements, the Company continues to update its risk management regulations regarding material issues, environmental considerations and safety and health hazard identification. Risk evaluation operations are performed on activities and operations inside and outside our factories. Furthermore, environmental sustainability is protected through chemical management, energy saving and carbon reduction, and circular economy, while reducing the Company's environmental safety and health risks proactively promoting job safety analysis (JSA), standard operating procedures (SOP) for operation safety requirements, hazard and operability study (HAZOP), and labor health protection, as well as comprehensive emergency response procedures. Please refer to 1.3. Occupational Safety and Health for a detailed description.

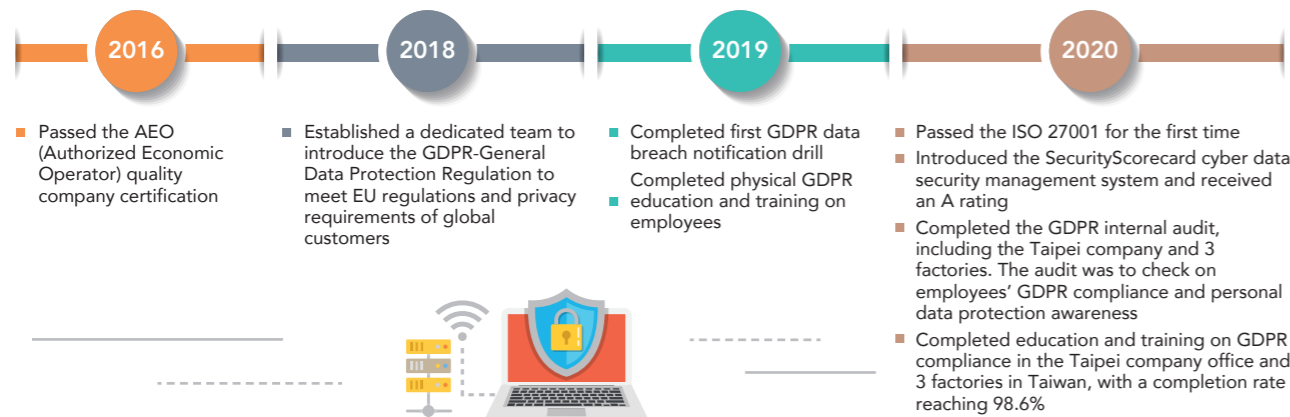
◆ Climate Change Risk Management

In recent years, with the impact of global climate change intensifying, DCC came to realize that climate is no longer in a state a change, but a state of emergency. In 2019, we implemented the Task Force on Climate-Related Disclosures (TCFD) framework to identify related risks in advance to further reduce possible operational disasters brought along with climate change. For related risks and response strategies, please refer to 2.2 Climate-related Change Risks and Opportunities.

◆ Confidential Business Information Protection

To ensure that information of our employees, customers and stakeholders is safe, we have introduced the ISMS-Information Security Management System and TSMS-Trade Secret Management System, and have passed a number of information security certifications.

Information Safety



In 2018, to improve the information security of the Company, we introduced the mobile office, new-generation firewall and mail safety system. In 2019, we incorporated AEO and legal compliance as key points into information security audits. Passed the ISO 27001 in 2020. With more and more data security frauds emerging in recent year, we have taken the initiative to prevent possible information security breaches. We Introduced the SecurityScorecard cyber data security management system and received an A rating.



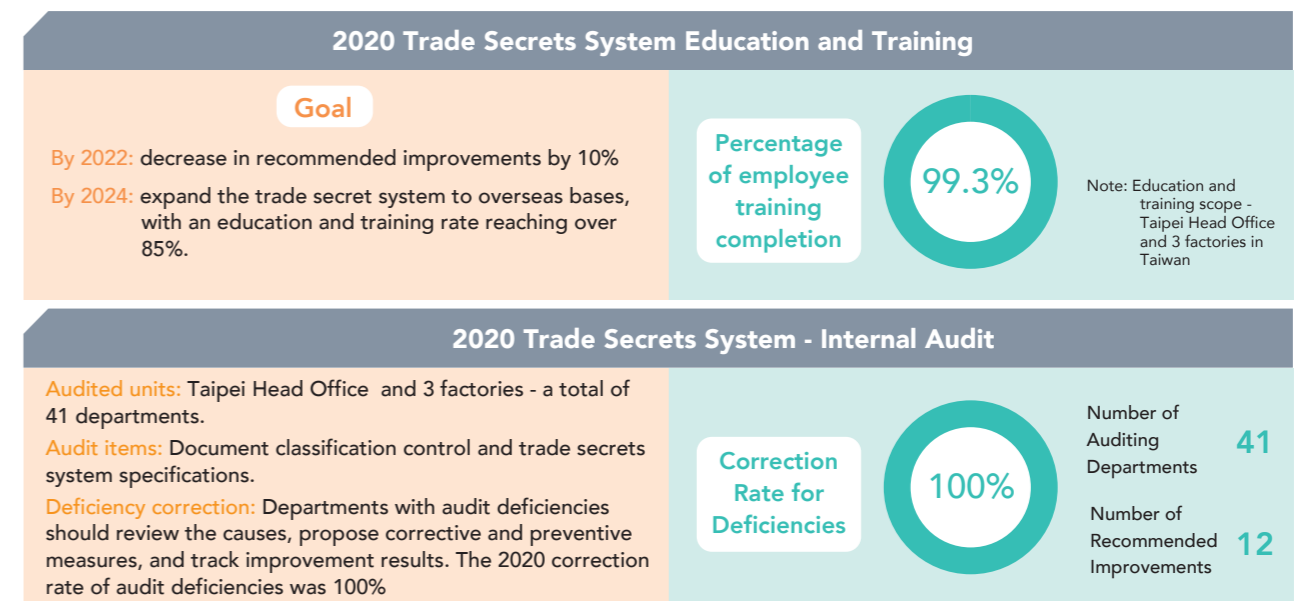
From 2020, we started to help raise our employees' awareness by annual GDPR compliance education and training and internal audits. At the same time, we promote information security and trade secret related systems on the notice area, and publish major domestic and international information security incidents to alert our employees, putting down the roots of information security. We expect to expand the GDPR education and training to our factories in overseas by 2022, with a completion rate over 95%.



Information Security Notice Area

Trade Secrets System

The Group put together a Trade Secrets Enforcement Team in 2015 and published the first version of the "CCPG Security Management Measures Governing Trade Secrets", and the measures are reviewed and amended on an annual basis to improve the system. Each year, we hold an education and training session to raise the awareness of trade secret protection as well as the Group's related measures. An annual internal audit is conducted to check the implementation status of the system.

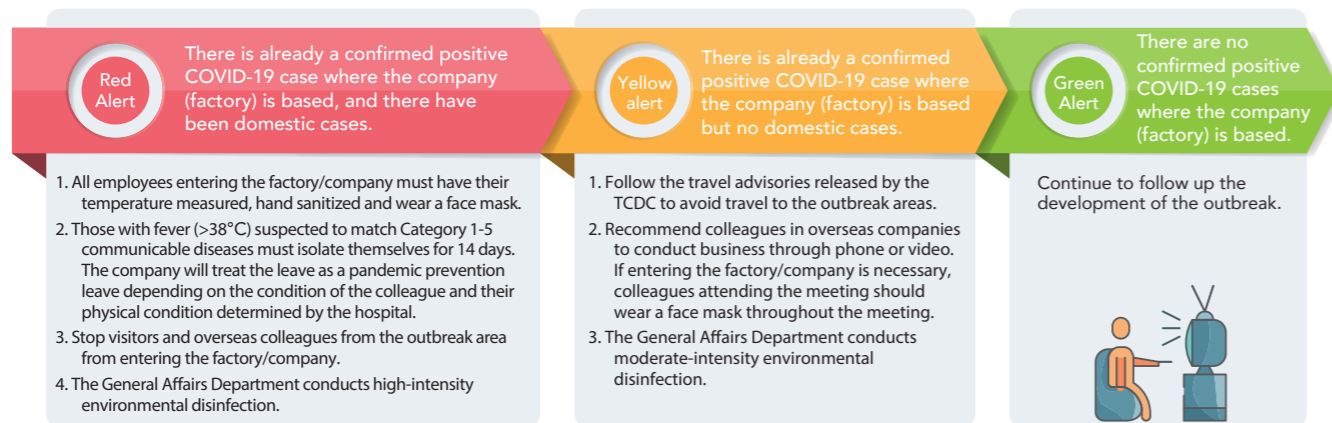


◆ DCC COVID-19 Tiered Control Measures

In an effort to respond to the pandemic outbreak, DCC established tiered control measures. At the same time, we continued to follow the disease's channels of infection, where positive cases are located, the number of people being infected, the symptoms as well as preventive measures published by the CDC and make immediate reviews and adjustments. The execution and discontinuation of these adjustments are announced at the beginning and end of the outbreak. Each factory of DCC implements corresponding pandemic preventive measures according to the outbreak alert of the control measures.

During its peak, we made every effort to keep our colleagues healthy. Our companies purchased face masks for all colleagues, the workplace was regularly disinfected, colleagues were asked to work on different floors and offices or from home to prevent infection in groups. In order to show our gratitude to expatriates for their dedication to duty during the outbreak, we offered an additional payment and full subsidies. Please refer to 4.3.1 Employee Benefits.

Externally, we also made a contribution to battle the disease with stakeholders and took on our CSR by providing government agencies, local communities and contractors a variety of pandemic prevention materials, aiming to stop the spread of the disease with the government and people. Please refer to 4.4 Community Relations.

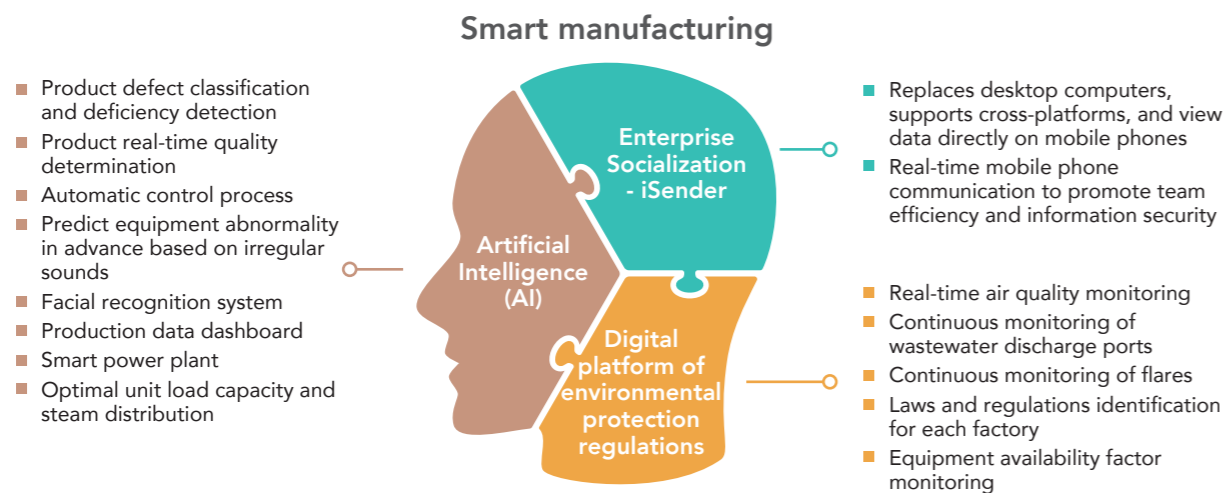


3.1.4 Smart Manufacturing

At DCC, we apply a variety of advanced electronic information tools in production, management, and information communication to improve production efficiency, while enhancing quality management and optimizing environmental safety and health mechanism. By doing this, we effectively integrate the information system of all factories to convey vital management information in real time so that customer's service needs can be responded in a timely manner.

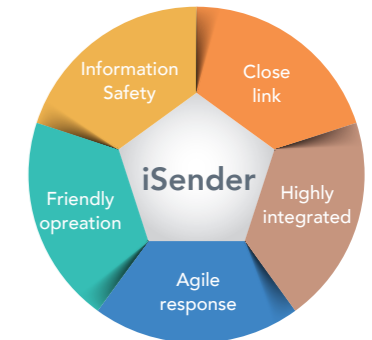
With evolvement of information technology and the Company's direction of internationalization, DCC will continue to develop into a smart manufacturing company using the most advanced electronic information technology to achieve the Company's management philosophy.

► Smart Manufacturing Application Field



► Enterprise Socialization - iSender

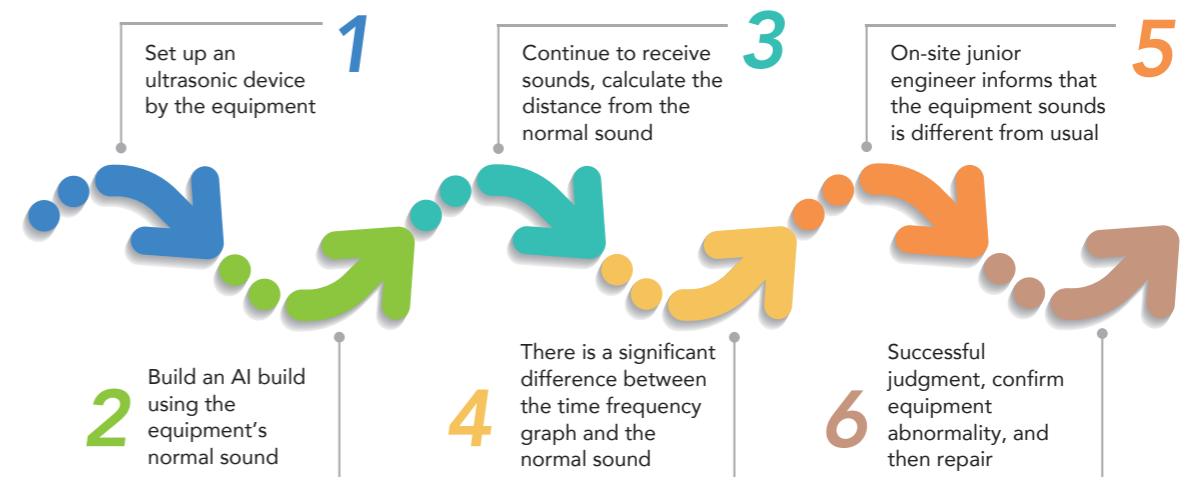
Our self-developed "iSender" is a powerful real-time communication system for enterprises; it is an indispensable tool for all employees. iSender has smooth basic communication and group discussion functions; there is also notification section so that each employee can get hold of important announcements in a timely manner. It also allows quick operation for employees to take leaves, business trips and manage overtime. Its friendly interface makes it easy and fun for employees to make applications.



Moreover, iSender is highly integrated with ERP; it is closely linked to a number of enterprise systems, implementing the concept of "Internet of Things". The data of each factory can be sent to the manager's mobile phone in time so that they are able to quickly grasp the factory situation to take necessary preventive control. iSender is not just a general administrative system, but it has gradually moved into industrial control, allowing the Company to become an "Industry 4.0" pioneer. For a detailed description of iSender, please refer to the book "Innovation and Application of CCPC Socialization APP" published by DCC's chairman Lin Shean-Tung.

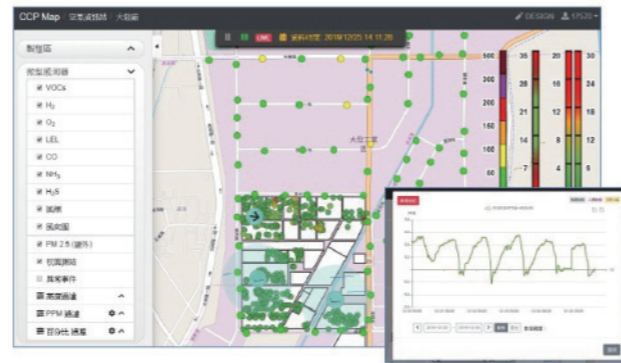
◆ iEar Project - Early detection of equipment abnormality based on irregular sounds

With DCC's achievement on the transformation of smart manufacturing in recent years, we continued with the development of a number of innovative projects, such as the iEar project, which originated during a factory inspection when the Chairman Lin Shu-Hong noticed an irregular noise. With further inspection, he discovered abnormal equipment. After that, the Management Information Center team began the attempt to simulate the experience of Chairman with AI, and set up an ultrasonic device by the equipment to use the time frequency map analyzed by AI. The automatic pre-warning function to detect abnormal equipment was successfully developed, enabling the production line to prevent equipment abnormality to avoid incidents. In the future, iEar will be incorporated into the notification robot iSender. If an irregular sound exceeds the threshold value, an alarm will be sent immediately to notify related personnel. Irregular audio frequencies will also be included in the training courses in the category of using AI to determine abnormalities.



◆ Self-developed Environmental Protection Digital Platform to Monitor Real-time Data

By applying the spirit of smart manufacturing to environmental protection, DCC has developed its own environmental protection digital platform integrating and monitoring related data of each factory and the Environmental Protection Bureau. By taking this approach, the Company's top management and CCPG HSE Division are able to get hold of the situation at any time to strengthen internal control. In the event of a discovery of irregular data, iSender will automatically notify relevant personnel to handle the emergency response, while maintaining the environmental safety.



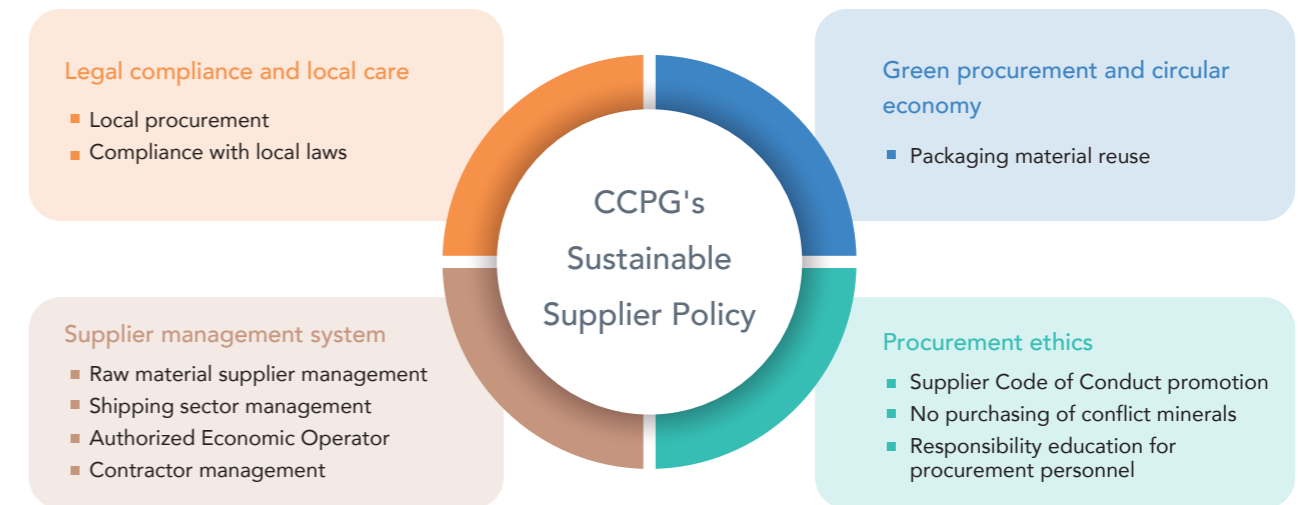
Real-time Air Quality Monitoring

3.2 Sustainable Supply Chain Management

Management Approach for "Supplier Management"

Meaning of Topics for DCC	Suppliers are the strategic partners for DCC to enhance products and services; they are at the same time vital stakeholders for us to practice CSR. Through the execution and promotion of sustainable supplier policy, we are able to effectively manage suppliers and jointly grow to reach the goal of sustainable management.
Policy Guidelines	<ul style="list-style-type: none"> Procurement Ethics and Human Rights Respect. Supplier management system. Legal compliance and local care. Green procurement and circular economy.
Target	<ul style="list-style-type: none"> Supplier Code of Conduct promotion - obtain signatures from 100% of suppliers by 2021 Promotion of Supplier Declaration of Conflict-free Minerals - Complete 100% signature rate by 2021. Implementation of the CSR risk assessment for sustainable suppliers - complete the on-site CSR audit of major raw material suppliers by 2022. Obtain at least 50% of procurement from local suppliers in the projects.
Action Plan	<ul style="list-style-type: none"> Supplier Code of Conduct promotion Promotion of Supplier Declaration of Conflict-free Minerals Implementation of the CSR risk assessment for sustainable suppliers <ul style="list-style-type: none"> Compile a supplier social responsibility risk assessment questionnaire Complete questionnaire and statistics on major raw material suppliers Perform an on-site audit on high-risk suppliers.
2020 Implementation Result	<ul style="list-style-type: none"> Supplier Code of Conduct promotion (new version) <ul style="list-style-type: none"> Obtained signatures from 100% of suppliers in contract transactions/B2B system in Taiwan. Foreign suppliers in Taiwan, signature rate (including on the website): More than 60%; continuing to reach the goal of 100% signature rate in 2021. Overseas suppliers: Expected 100% signature rate by the end of 2021. Promotion of Supplier Declaration of Conflict-free Minerals <ul style="list-style-type: none"> Achieve 100% signature rate of supplier transactions/B2B system. Continuing to reach the goal of 100% for foreign suppliers in Taiwan in 2021. Overseas suppliers: Expected 100% signature rate by the end of 2021.
Communication/Grievance Mechanism	<ul style="list-style-type: none"> Continue to maintain communication with external suppliers, while providing coaching and promoting policy to employees. Grievance mechanism: Report to ccpgaudit@ccpgp.com

DCC follows CCPG's sustainable supplier policy, which is divided into four aspects: procurement ethics and human rights respect; supplier management system; legal compliance and local care; green procurement; and circular economy:



3.2.1 Procurement Ethics

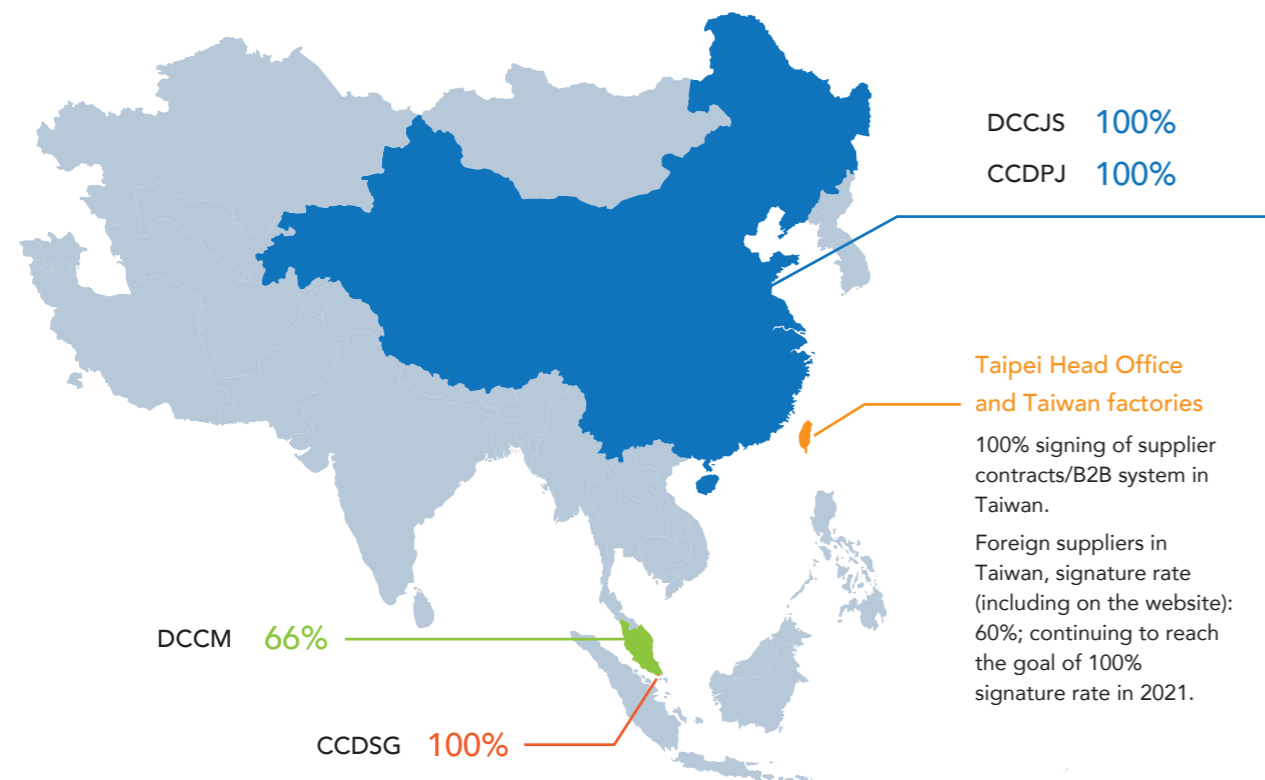
◆ Supplier Code of Conduct promotion



In a bid to raise CSR awareness in our suppliers, DCC facilitate promotion regarding matters including labor rights, human rights issues, business ethics and conflict minerals. We also enter into contracts or agreements with suppliers who we have business dealings with.

According to the 2020 feedback and signature situation, we have revised the Supplier Code of Conduct. The recognition for the code covers (1) supplier announcement on the website (2) supplier's own version (3) signing the company's version. The current implementation status of the signing of the Supplier Code of Conduct is as follows. In 2021, we will continue to reach the goal of 100% signing rate.

► Current Implementation Status of the Signing of DCC Supplier Code of Conduct



◆ No purchasing of conflict minerals

Conflict minerals refer to metallic minerals mined by forced labor under the harsh working conditions primarily from illegal armed conflict areas in or near the Democratic Republic of the Congo. The mined conflict minerals and their sales are controlled by armed groups to finance conflicts in neighboring areas. To acquire metal products from conflict minerals is regarded as indirect support for procurement behavior that violates humanitarianism.

With our continuous dedication to responsible supply chain, DCC continue to make a contribution to reducing social, environmental, and safety risks in the supply chain. DCC are committed to not purchasing conflict minerals and products made from conflict minerals. At the same time, we ask our suppliers to also make an effort to ensure a responsible supply chain.

To ensure that our products do not contain conflict minerals, DCC's primary policies are as follows:



No purchasing of
conflict minerals

- Suppliers must sign the "Supplier Code of Conduct" as to commits that their products will not contain conflict minerals.
- Prior to conducting procurement operations, ensure that products provided by suppliers are involved in conflict minerals.
- For suppliers who provide products related to conflict minerals, we conduct a regular investigation each year on specific metal manufactures or their precious metal counterparts to find out whether they are on the Good Delivery List announced by the London Bullion Market Association (LBMA) in accordance with the latest Conflict Minerals Reporting Template (CMRT) and Cobalt Reporting Template (CRT) released by Responsible Minerals Initiative (RMI). By doing this, we ensure the origin of metals used by our suppliers.

◆ Responsibility education for procurement personnel

In addition for the Sourcing Policy for Conflict Minerals designed for suppliers, we believes that the front-line procurement personnel who communicate with suppliers must also be provided with CSR education. In addition to providing our new procurement personnel with practitioner and CSR education and training, we also develop their basic concepts and help them to understand the Group's CSR policy. After becoming an official employee, the CSR team enforces courses with other related topics through the Group's e-learning education and training platform. This continues the strengthening of CSR awareness of the procurement personnel.

◆ Compliance with local laws

In an attempt to comply with the EU REACH and RoHS requirements to reduce the impact of chemicals on the ecosystem, DCC have established a chemical management mechanism (for management measures, please refer to 1.3.1 Chemical Management). We also require raw material suppliers of related products to provide the following review information:

- Provide ICP-AES test data for detectable substances or analysis report from a third party (e.g. SGS) - 10 hazardous substances required by RoHS.
- Safety Data Sheet (SDS).

► DCC's Environmental Substance Management Procedures



3.2.2 Supplier management system

DCC hopes, by making constant improvements regarding the supply management and requirements, we will be able to reduce quality, environmental, safety and society risks, further achieving the goal of reducing the CSR risks of suppliers.

The DCC's supplier management system is explained as follows in three types: major raw material suppliers, shipping company and contractors:



◆ Raw material supplier management

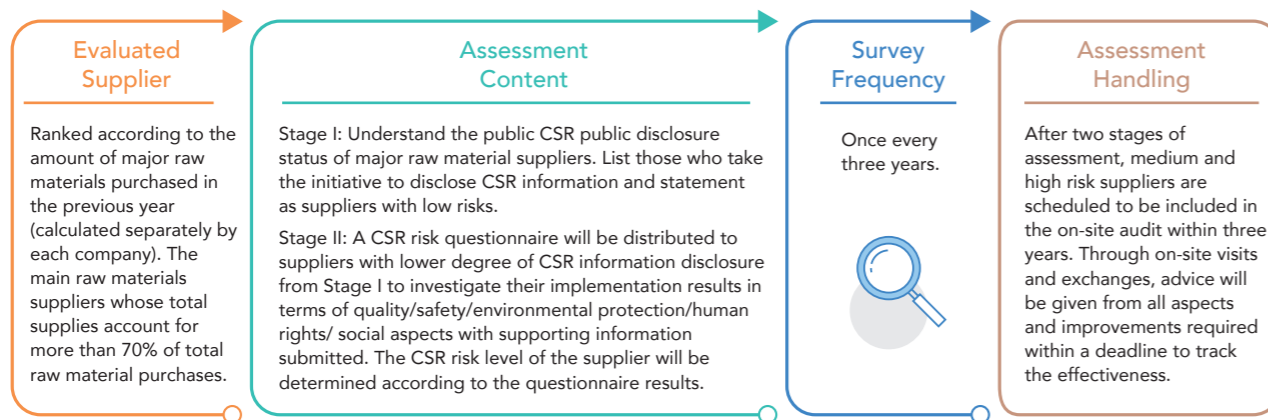
DCC's management on raw material suppliers is as follows. In 2019 to 2020, there were 14 qualified major raw material suppliers in Taiwan; 132 in other countries, totaling 146 suppliers (the number of qualified suppliers was counted by each company in the Group. If a supplier is a qualified supplier in 2 of the Group's companies, the number of that supplier will be counted by each of the 2 companies).



Note: The above enforcement points may vary slightly depending on local regulatory requirements and regulations for operations.

CSR Risk Assessment of Major Raw Material Suppliers

Taking into account CSR risks, DCC began to conduct investigations on the CSR disclosure status of major raw material suppliers in 2018. The first CSR risk investigation and assessment methods for 2019 are as follows:



The results for the 2019 survey relating to CSR risk assessment procedures described above are as follows:

► Statistics of CSR Policy Risk Survey of DCC's Major Raw Material Important Suppliers

Company/ Factory	Number of Suppliers Assessed (Number of Suppliers)	Number of Suppliers with a Public CSR Report (Number of Suppliers)	Number CSR Questionnaires (Number of Suppliers)	Low-risk (Number of Suppliers)	Medium-risk (Number of Suppliers)	High-risk (Number of Suppliers)	Low-risk (%)
DCC Taiwan	14	14	0	14	0	0	100%
DCCJS	4	4	0	4	0	0	100%
CCDPJ	41	15	26	25	1	15	61%
CCDSG	19	19	0	19	0	0	100%
DCCM	10	9	1	9	0	1	90%
Total	88	61	27	71	1	16	81%

The results indicate that 81% of the Group's major raw material suppliers have CSR awareness and have made proactive action plans. Several high-risk suppliers are limited by company size and resources. For this, DCC will arrange on-site audits to provide coaching and in-depth audits. In 2020, 1 on-site audit was conducted, among them, 9 high-risk suppliers of CCDPJ have terminated cooperation due to market factors, customer complaint issues and the vendors' own reasons. Other on-site audit plans are scheduled to complete coaching and in-depth audits before the second quarter of 2022. These on-site audits will be taken into account for the Group's future procurement plans, while reducing the Group's CSR risks in terms of supplier management.

◆ Shipping sector management

DCC also regards shipping and logistics as part of product quality. The management regulations for shipping companies are as follows: In 2020, there were 40 qualified shipping companies in Taiwan and 24 in other countries, totaling 64 suppliers.



Note: The above enforcement points may vary slightly depending on local regulatory requirements and regulations for operations or the characteristics of the goods to be shipped.

In order to ensure the shipping companies that carry products purchased or sold by DCC meet the specified requirements of CCPG and to reduce transportation risks and improve shipping quality, we have formulated an on-site assessment process. In 2020, 29 shipping companies were assessed in Taiwan and 6 in other countries. Except for one in Taiwan that has been rated D, all other shipping companies passed the assessment. The D-rated sector will be provided with coaching, and will be reassessed in six months. This sector may be reclassified as a qualified contractor once assessment has been passed. Taking Taiwan as an example, the assessment rules are as follows:



Note: The above enforcement points may vary slightly due to different local regulatory requirements and regulations for operations.

There were no major shipping incidents in DCC in 2020; the Company has established a comprehensive management mechanism for shipping incidents. If relevant incidents occur, the shipping company will be asked to propose an improvement report and measures to prevent recurrence, while including the subsequent follow-up of the incidents and related handling of the shipping company assessment.

Authorized Economic Operator (AEO)

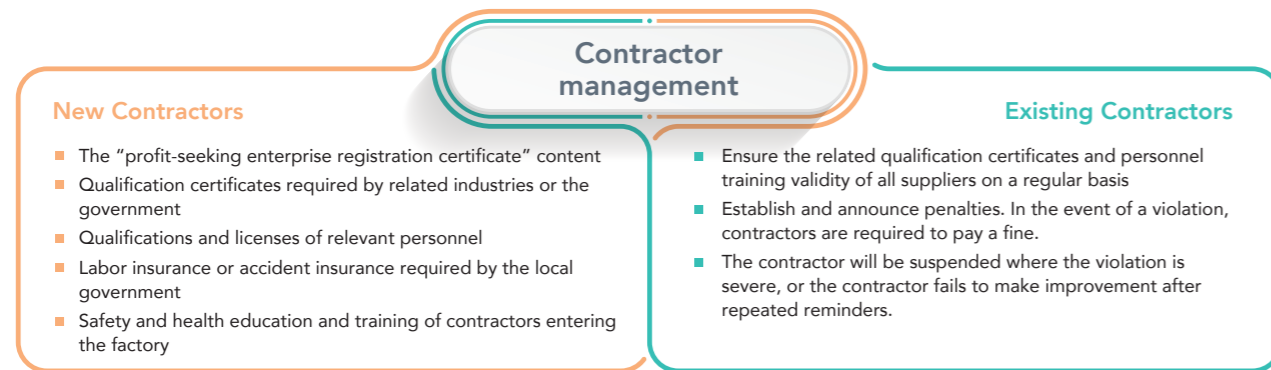
DCC factories in Taiwan and CCDPJ have been accredited with AEO certification. Raw material suppliers and shipping companies have been included into the business partner management procedures. This is to review the safety operating procedures and measures of the business partners on a periodic basis or at any time, ensuring that they are in compliance with the safety standards, thus reducing risks of logistics safety.



AEO Safety Policy

◆ Contractor management

At DCC, we require contractors to comply with local regulations, and fulfill their responsibility in terms of taking out insurance for their employees and contracted personnel and ensuring their safety. In addition, the Company's factories clearly state contractor policies and penalties, aiming to effectively manage the behavior of contractors in the factory to maintain the safety of factory operations. The contractor management regulations are as follows. At DCC, in 2020, there were 1,892 qualified contractors in Taiwan and 182 in other countries, totaling 2,074 contractors.



Note: The above enforcement points may vary slightly due to different local regulatory requirements and regulations for operations.

Each worker who enters DCC is subject to labor safety and health education course and is only allowed to enter the factory once training is completed. Retraining is required if the training validity has expired. This effectively facilitates suppliers' safety awareness and to reduce the risk of accidents. In 2020, a total of 5,171 contractors received training and testing for DCC. The training attendance is as follows:

► 2019-2020 Training Hours Received by Contractors

Year/Gender	2019			2020		
	Male	Female	Total	Male	Female	Total
Hours/Number of People						
Training Hours	6,525	326	6,851	4,851	320	5,171
Number of People at the End of the Year	6,767	331	7,098	4,851	320	5,171
Average Hours	0.96	0.98	0.97	1	1	1



ESG Report
Appendix

Note 1: As contractor training of CCDSG and CCSG is combined, the data calculated is based on the combination.

Note 2: For detailed information on each factory for 2020, please refer to Appendix C.



3.2.3 Green procurement and circular economy

◆ Local procurement

During the process of contracting expansion or renovation projects, we try our best to give priority to local companies. DCC aim to prosper with local companies providing that both quality and cost are assured. In 2020, the total amount of procurement from local companies where DCC's respective factories are located accounted for over 50% of the Group's total project procurement amount in the year.

◆ Packaging material reuse

DCC's raw materials and products cover a variety of packaging materials and transportation methods. Whether these materials are for self-use, suppliers or customers, we continue to assess appropriate transportation and packaging methods hoping to reuse the materials under the circumstances that they meet all the requirements of the customer. This approach not only conserves resources, but also help protect the environmental. Improvements are divided into two types:

A. Customer/supplier (including procurement within the Group) packaging material recycling

B. Swap to recyclable (reusable) materials

► 2020 Summary of Implementation Result on the Reuse of Packaging Materials

Improvement Type	Region	Target	Packaging Materials/Implementation Method	Annual Recycling (Reduction) Quantity
A	DCC Taiwan	In the Group	Recycling of iron barrels for finished products	507
			Recycling of PE barrels for finished products	2,304
			Recycling of bulk bags for finished products	1,520
B	CCDSG	Group's companies	Iron barrel recycling	14
	DCCJS	Customers	Reuse of IBC containers	1,800
	DCCM		IBC barrel recycling	154
	CCDSG	Group's companies	Plastic containers changed to IBC containers	166

While we continue to promote recyclable packaging materials, we also take into account the safety of packaging to ensure that products are safely stored during shipping and storage. DCC will continue to seek innovative packaging materials and shipping methods. At the same time, through measures including factory unloading, conveying and storage of equipment, and automation, we are able to reduce the use and consumption of packaging materials, thus helping to protect the environment.

3.3 Stakeholder Communication

In order to pursue sustainability, DCC have categorized stakeholders and set up communication channels to effectively collect their information, while understanding their needs and expectation of us. The information collected on Board of Directors is used as the vital reference for formulating CSR policies and management.





◆ 7 Categories of Stakeholders




Through the AA1000 SES 2015 Standards, we have successfully identified 7 categories of stakeholders of DCC. These stakeholders include employees/unions, governments/competent authorities, customers, community residents surrounding the factory, suppliers/contractors, shareholders/joint ventures, and trade associations.



◆ Stakeholder Agreement

We value the needs and expectations of our stakeholders and have identified important stakeholders through each unit's feedback of questionnaires. In 2020, the communication channels/frequencies are listed as follows:

Stakeholders	Communication Channel	2020 Communication Frequency
 Customers	<ul style="list-style-type: none"> Phone, letter, fax, webpage Customer visits, visit customers Exhibition exchange Customer satisfaction survey Customer evaluation at the factory Set up customer complaint channel 	<ul style="list-style-type: none"> 1 customer satisfaction survey Occasional communication via phone, email, fax and webpage Occasional customer visits, technical services
 Suppliers/contractors	<ul style="list-style-type: none"> Phone, letter, fax, webpage Supplier/contractor visits, and visited by them Supplier/contractor education and training Supplier evaluation, audit 	<ul style="list-style-type: none"> Mutual visits with suppliers/contractors from time to time Several education and training provided to suppliers/contractors per year; in 2020, a total of 5,171 contractors were trained and given a test for DCC. Evaluated 1,991 suppliers on their delivery 7 supplier on-site audits As of the end of 2020, there were 146 qualified main raw material suppliers, 64 qualified transportation suppliers and 2,074 qualified contractors on the system Occasional phone and email communications Two transportation safety meetings each year
 Community residents surrounding factories	<ul style="list-style-type: none"> All factories provide a grievance number, mailbox, security guard booths Participate in/sponsor community activities Environment/public facility adoption and maintenance Invite residents to visit the factory Provide scholarships to local and neighboring universities 	<ul style="list-style-type: none"> Visit community residents from time to time Participated in and sponsored 64 community activities Proactively sponsor local activities and public facility adoption and maintenance 41 community residents were invited for factory visit
 Shareholders/joint ventures	<ul style="list-style-type: none"> Board of Directors Management meeting and monthly report 	<ul style="list-style-type: none"> Hold 5 Board meetings a year Hold monthly management meeting

Stakeholders	Communication Channel	2020 Communication Frequency
 Employees/labor unions	<ul style="list-style-type: none"> Various types of work meetings (quality/environment/safety/production, etc.) Various employee benefit meeting Internal meeting or seminar Annual performance evaluation Education and training Grievance mailbox, e-Bulletin board, questionnaire, interview 	<ul style="list-style-type: none"> Work meetings (weekly/monthly/quarterly/annually) Employee benefit meetings (quarterly) Various types of meetings held from time to time Occasional communication through grievance mailbox, e-bulletin board, questionnaire surveys, interviews, etc. 1 annual performance evaluation and 4 annual regular evaluations
 Governments/competent authorities	<ul style="list-style-type: none"> Promote on par with central and local competent authorities, and briefings, review, audit and meeting Visits by government officials Joint fire drills Official correspondence 	<ul style="list-style-type: none"> Declaration, reviews and on-site factory inspections Official correspondences and telephone communications Occasional visits by government officials Occasional participation in meetings (review meetings/negotiation and discussion meetings/briefings/seminars/forums) multiple times a year
 Trade associations	<ul style="list-style-type: none"> Participate in meetings held by trade associations 	<ul style="list-style-type: none"> Participate in meetings from time to time Hold important positions in 7 public associations

DCC have established multiple communication channels to tackle different issues: in terms of internal labor and human rights issues - our employees can offer their opinions or air grievances via labor-management meetings and labor union organizations; in terms of residents living near the factory - we maintain a smooth communication channel, and provide various platforms to give feedback on environmental issues that concern them the most; and in terms of whether our operations are in compliance with the principle of good faith - we have set up internal audit control units to supervise related matters. As DCC has a straightforward reporting system, we also carry out independent investigations.

Aspect	Grievance Channel	Handling Process	Result
Legal Compliance	<ul style="list-style-type: none"> In an event of an unlawful conduct, departments, factories or individuals must notify the Legal Department for investigation. Reports can be made via phone, fax, letter, or email (CCPGLG@ccp.com.tw) (ccpgaudit@ccp.com.tw) 	The Legal Department will carry out an investigation by itself or in conjunction with the Audit Department and a report submitted. Those involved will be corrected and disciplined to prevent recurrence.	In 2020, there were no legal compliance or anti-corruption-related reports or complaints.
Society and Economy	<ul style="list-style-type: none"> All departments are required to comply with laws and regulations. In an event of an unlawful conduct, they must take an initiative to make a report or notify the Legal Department for investigation via phone, fax, letter, or email (ccpglg@ccp.com.tw) 	For unlawful issues in the social or economic aspect, an investigation in conjunction with the Auditing Office should be conducted and a report submitted. For any unlawful conduct, compliance must be reviewed and countermeasures proposed to prevent it from recurring.	In 2020, there were no social and economic reports or complaints
Environment	<ul style="list-style-type: none"> Safety and environment departments of all factories Security booths of all factories All factories provide a grievance number for complaints, mailbox 	Upon the receipt of a grievance, the related unit will be notified to handle the matter, which is then submitted to the management of each company. The management of each company will then reply with the course of action as well as the subsequent result.	In 2020, there were no related environmental-related reports or complaints.
Corporate Human Rights and Labor Conditions	<ul style="list-style-type: none"> If any violation of human rights and labor conditions is discovered, departments, factories or individual employees may make a report via the labor-management platform, labor union organizations, phone, fax, correspondence or email (akaky_chiang@ccpgp.com) 	Factory managers or human resource department of all companies should make an effort to carry out an investigation upon receiving a grievance case. If the case proves to be true, the guilty party should be held responsible in accordance with the work rules and related laws and regulators; where the grievance case is proven to be a false accusation or frame-up, the person filing the grievance should be disciplined in accordance with the work rules.	In 2020, there were no reports or complaints regarding corporate human rights and labor conditions.

◆ External Participation

DCC is dedicated to participating in trade associations, academic societies, social gatherings and other non-profit organizations, striving to enhance industrial development and progress through exchanges. As a means of putting our influence into use and improving the value of the industrial chain, we have assigned managers to serve in roles in which they are experts, leading industry development or participating in academic research.

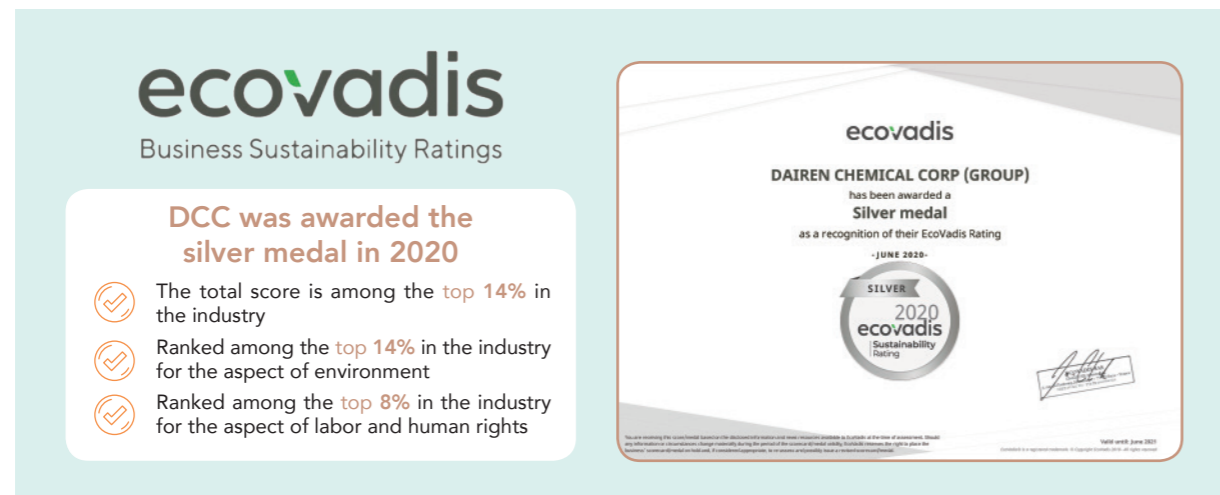
I. Signing the “Responsible Care Global Charter”



Upholding the spirit of the “Caring for Society and be Responsible and Disciplined”, DCC have signed up to the commitment and statement “Responsible Care Global Charter” since 2000. At the same time, we keep on improving chemicals regarding environment, health and safety (EHS) management systems in accordance with international standards, jointly promoting the co-prosperity and sustainable development of Taiwan’s chemical industry.

II. Participation in EcoVadis Sustainability Ratings

EcoVadis is a third-party rating platform in France for sustainable development of the global supply chain, with its assessment method based on international CSR standards. We ensure the implementation of the Group’s CSR to achieve the objective of sustainability development by entrusting the third-party rating platform.



III. Trade Unions and Associations

In 2020, DCC was involved in a total of 5 industry associations, 3 R&D associations and academic societies, and 5 other associations. We also serve important roles in 7 organizations, providing the Company with greater benefits in sustainability through proactive exchanges with external entities.



“Safety” has always been a top priority for CCPG Executive Board Chairman - Lin Shu-Hong. Upon reading the “Foundation of the Basics of Industrial Safety” on The Chemical Daily published by Arai Yasukazu in 2019, Chairman Lin felt that he shared a similar philosophy on safety and that he was responsible for passing down his life experiences to the younger generation. In view of this notion, Chairman Lin began to carry out internal education and training, and recommended the book to the then minister of economic affairs, Shen Jong-Chin. Agreeing with Chairman Lin, the book was introduced to the Petrochemical Industry Association of Taiwan. Thanks to the efforts of the former Chairman of the Petrochemical Association, Lin Fu-Shen, who gained the authorization of the author, the book was translated into Chinese to be used as a teaching material for the petrochemical industry to prevent industrial accidents.

Industry Associations	Explanation
Taiwan Chemical Industry Association	CCPG Executive Board Vice Chairman Chen Shien-Chang serves as Vice Chairman
Petrochemical Industry Association of Taiwan	Chairman Lin Shean-Tung serves as Executive Director Chief
Chinese National Federation of Industries	Vice Chairman Huang Ho-Ching serves as Alternate Director
Taiwan Synthetic Resin & Adhesives Industrial Association	Vice Chairman Huang Ho-Ching serves as Honorary Chairman Top Advisor Lin Fu-Shen serves as Director
Taiwan Responsible Care Association	Vice President Hsu Ying-Chieh Serves as Director
R&D Associations and Academic Societies	Explanation
Catalysis Society of Taiwan	Chairman CCPG Executive Board Chairman serves as Honorary Member Top Advisor Lin Fu-Shen serves as Consultant
Taiwan Institute of Chemical Engineers	President Huang Fu-Chu serves as Director
Fractionation Research, Inc.	-
Nature of Member	
Dafa Industrial Park Association	Occupational Hygiene Association of Taiwan
Kaohsiung County Industrial Association	Daishe Industrial Park Manufacturers Association
Yunlin Hsien Industrial Association	

IV. External Validation of DCC



DCC received the 2020 Best Trade Contribution from the Bureau of Foreign Trade, for the recognition of our contribution to Taiwan’s economic and trade development.



DCC was ranked among the 500 Outstanding Export/Import Business Certificate in 2019



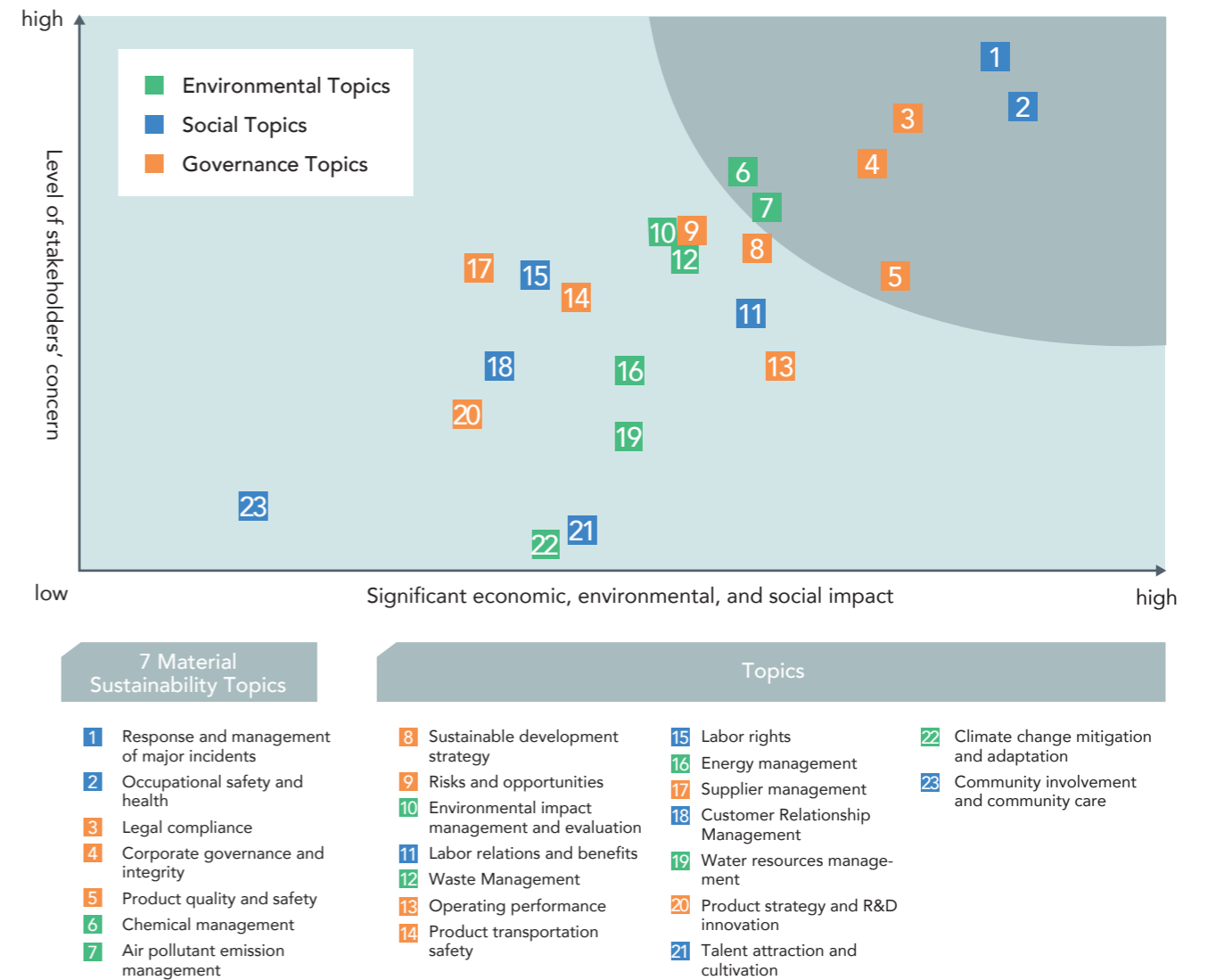
3.4 2020 Material Sustainability Topics

As DCC value the needs and expectations of our stakeholders, we use questionnaires to identify and analyze the issues concerned by stakeholders. Issues identified are used as the reference for information disclosure in the report as well as the basis for formulating CSR policies to facilitate effective communication with different stakeholders.



This year, compared to 2019, a total of 23 sustainability issues were compiled, adding "labor rights". After questionnaires were analyzed, 7 material sustainability topics were produced as the disclosure key points of this Report. Compared to 2019, we have newly added "legal compliance", "corporate governance and integrity" and "chemical management" while excluding "customer relationship management" and "supplier management". The relevant information is disclosed in detail in this Report.

► Scope and Boundaries of Material Topics



Topic	GRI Standards Corresponding Table	The Significance of Material Topics to DCC
Response and management of major incidents	GRI 102-11	◇ By providing our personnel with response training, incident analysis and regular emergency response drills conducted using different scenarios, employees are able to grasp response techniques and correct procedures. By taking this approach, we are able to effectively reduce the impact on society and the environment in the event of a major accident.
Occupational safety and health	GRI 403	◇ Through the effective promotion and implementation of health and safety, we strive for a working environment that enables employees to work with peace of mind, further shaping a sustainable company.
Legal compliance	GRI 205-3 GRI 307-1 GRI 419-1	◇ DCC is a firm believer that, by maintaining a transparent, open and efficient corporate governance mechanism and adhering to strict compliance of applicable laws and regulations, we can lead our Group to stable and sustainable growth.
Corporate governance and integrity	GRI 102-18	
Product quality and safety	GRI 416 GRI 417	◇ At CPPG, we pride ourselves on providing customers with satisfactory products and services, while at the same time growing with them and suppliers. We improve quality through hard work and innovation to ensure that all quality and safety of our products are in compliance with government regulations and product-related laws, as well as customer requirements.
Chemical management	GRI 416 GRI 417	◇ DCC takes a responsible attitude on the subject of R&D, raw material acquisition, production, use and disposal stages of chemicals. We seek safe alternatives and reductions when using high-risk/hazardous substances to reduce any negative impact on human health and the environment. ◇ With respect to production management, we create a safe and secure working environment to reduce the potential hazards to labor production.
Air pollutant emission management	GRI 305	◇ DCC is devoted to creating a better living environment for the public so that Taiwanese people can enjoy clean air and a blue sky. This is our greatest motivation to keep on promoting the improvement of air pollution.

Stakeholders							Management Approach and Related Information	Page
Employees/ labor unions	Suppliers/ contractors	Customers	Governments/ competent authorities	Shareholders/ joint ventures	Community residents surrounding factories	Trade associations	Corresponding Chapters	
							1.3.3 Response and management of major incidents	35
							1.3.2 Workplace Safety and Process Safety 4.3.2 Healthcare	27 114
							3.1.3 Risk management	73
							3.1.2 Corporate Governance	72
							1.3.1 Chemical management 1.2.2 Product quality management	23 18
							1.3.1 Chemical management	23
							2.5.1 Air Pollutant Emission Management	59



Social Inclusion



- 4.1 Talent Deployment
- 4.2 Talent Cultivation and Development
- 4.3 Employee Care
- 4.4 Community Relations

Key Performance



100% Taiwanese workers hired

100% Taiwanese workers are hired in Taiwan factories



70 hours of education and training per person



Birth incentive system and various allowance allocated

In 2020, 41 employees received childbirth incentive, totaling NT\$820,000 and childcare subsidies totaling NT\$860,000, and allowances for weddings and funerals totaling NT\$2.96 million



100% approval rate and return of original posts

100% approval rate for unpaid parental leave applications and 100% rate for employees to return to their original posts.



Received Badge of Health Management and Badge of Initiation of Healthy Workplace

Dafa Factory received the Healthy Workplace Management Award Mailiao Factory received the Badge of Initiation of Healthy Workplace



64 social contribution projects

Took part in and sponsored a total of 64 social contribution projects in Taiwan and overseas.

"Talent" has been the foundation of DCC's sustainable operations, and through a variety of human resources management policies, comprehensive education, training planning, and Employee Assistance Programs (EAPs), we have created an inclusive system for selecting, nurturing, employing and retaining talent. We have also extended the program to employees, including physical and mental health management, providing a friendly workplace, while also bringing our employees together and deepening their sense of unity. Meanwhile, we continue to interact with community organization so as to strengthen local relationships. Through subsidies and material sponsorship, we organize a variety of types of social welfare activities. By doing what we can to make contributions, we hope to make a difference to society.

4.1 Talent Deployment

Rich professional knowledge, passionate work attitude and honest and sincere behavior are the code of conduct for all DCC's employees. They are also the keys to our growth. Based on the notion, designing a diverse and heart-warming talent management system and human resource development policy is our goal to refinement.

4.1.1 Human Resources Policy

DCC's most important partners are employees; they are also our key stakeholders. We abide by internationally recognized sustainability and human rights guidelines, including the core labor standards of the United Nations Global Compact and International Labour Organization as well as local regulations where our factories operate.

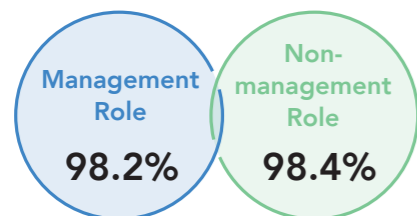
The 2017 Chang Chun Group Code of Conduct in accordance with CCPG has become a binding force for all of DCC's employees around the world. We are committed to providing our employees with the respect that they deserve, as well as ensuring a positive work environment. At the same time, we also pursue the sustainable development and environmental sustainability of DCC, while complying with corporate ethics. According to information referring to international human rights norms, sustainability assessment requirements and benchmarking trends, we conduct a review on 5 human rights issues each year to ensure there is a comprehensive management system to mitigate the human rights risks faced.



DCC Code of Conduct



2020 Education and Training on Human Rights - Employee Training Completion Percentage



Note 1: Management role - entry-level managers (inclusive) and above; Non-management role - general employees.

Note 2: As of 2020/12/31, employees who had not completed human rights-related education and training were mainly employees on unpaid parental leaves and newcomers, and will complete such education and training in 2021.

Note 3: For detailed information on each factory for 2020, please refer to Appendix D.



ESG Report
Appendix



The training rate of the Company is expected to reach over 95% in 2021

We included human rights-related issues in the education and training courses received annually by employees since 2019. For factories in China and Southeast Asia, we have also launched human rights-related education and training in simplified Chinese and English. We believe such approaches will expand knowledge associated with human rights, increase the self-awareness of employees and protect the rights of employees. Following CCPG's footsteps, in 2020, DCC added the "Chang Chun Group Child Labour Prevention and Remedial Measures Operating Procedures" and "Chang Chun Group Prohibition of Forced Labour Procedures". In addition, the Company's all employees (including senior managers) in Taiwan and overseas receive education and training on regulatory compliance and human rights through the e-Learning platform and are tested on an annual basis.



Meeting with Department Heads to promote the Group's Human Rights Policy

Each year, members of the HR Division visits each factory and promotes human rights policies to department heads, while also stressing the importance of the Company's commitment to human rights issues and risk management. Moreover, policies have also been formulated to address issues in relation to human rights. In 2020, 6 meetings focusing on policy promotion were held.

4.1.2 Composition of Talent

The addition of quality and diverse talented people is the foundation of our longstanding operations. Due to the COVID-19 outbreak in the beginning of 2020, many campus recruiting events were suspended. However, with outbreak easing in the second half of 2020, we proactively took part in university and college recruiting events. Not only that, we also applied for spaces for R&D alternative civilian service, and participated in industry academia collaboration. At the same time, we provide competitive salary and benefits, comprehensive and professional categorized education and training, making every effort to attract talent.

In 2020, we took part at 3 campus recruitments (virtual online recruitment at National Central University, recruiting expo at National Tsing Hua University and campus recruitment at National Cheng Kung University) was carried out. We also worked with the special industry-academia classes with National Taiwan University of Science and Technology and National Taipei University of Technology to provide internships, stabilizing the source of potential talent. Moreover, through industry-academia cooperation, our senior colleagues were assigned to go into the campus as teachers to engage in work experience exchange in the class, enabling students to get to know more about chemical industries.

We have set up an official WeChat account for CCPG Panjin Factory to announce recruitment information and a variety of highlights from activities to draw our employees together.



100% Taiwanese workers are hired in Taiwan factories



Campus Seminar at Liaoning Mechanical and Electrical Vocational Technology College



Talent Recruitment of Panjin City
Talent Service Bureau Organization



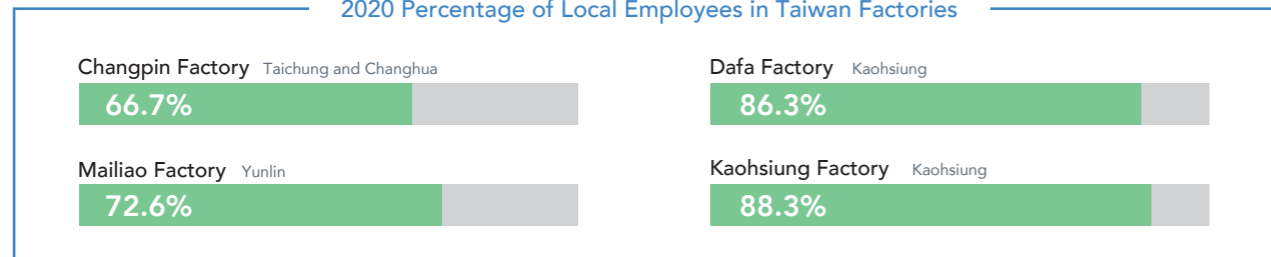
CCPG Panjin Factory WeChat
Gomoku Competition



CCPG Panjin Factory WeChat
Recruitment Announcement

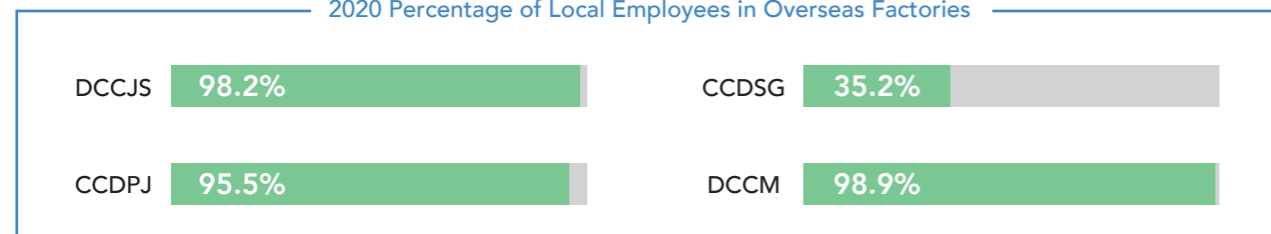
As we place great importance on local talent, 100% employees we hire in Taiwan factories are Taiwanese, and we give priority to local residents when we take on new recruitment. Among our factories in Taiwan, 85% of the employees of DCC Dafa Factory and Kaohsiung Factory from local areas, and over 95% in factories in China and Malaysia.

2020 Percentage of Local Employees in Taiwan Factories



Note: In 2020, Changpin Factory planned to build a new DCC factory and established a DCC workforce. Under the Group's planning, DCC was merged by CCPC in 2021.

2020 Percentage of Local Employees in Overseas Factories



DCC's employees in Taiwan and overseas have maintained a stable growth in the past three years. In terms of the composition of employees, the majority of our employees are aged between 30-50; the average age of all employees is 40; and average length of service is 13 years. Our manpower structure is young with rich experience and strength and 100% of our high-level management comes from the grassroots level of the Company.

Manpower Composition for 2018-2020

Unit: Number of People

Contract Type		Region	2018		2019		2020	
			Male	Female	Male	Female	Male	Female
Employees on fixed-term contracts	Part-time employees, contract drivers, consultants	Taiwan	2	4	2	4	4	4
		Overseas and expatriates	0	2	0	3	0	0
		Subtotal	2	6	2	7	4	4
Non-fixed term Contract	Other employees	Taiwan factories	856	60	869	64	855	65
		Overseas factories and expatriates	544	134	538	129	564	130
		Subtotal	1,400	194	1,407	193	1,419	195
Total			1,402	200	1,409	200	1,423	199

Age Distribution of Employees for 2018-2020

Unit: Number of People

Age Distribution	2018		2019		2020	
	Management	Non-management	Management	Non-management	Management	Non-management
Under 30 years old	0	325	0	274	1	239
30-50 years old	106	1,025	106	1,074	108	1,113
Over 50 years old	54	92	55	100	55	106
Total	160	1,442	161	1,448	164	1,458

New Employee Age Distribution for 2018-2020

Unit: Number of People

Age Distribution	Region	2018		2019		2020	
		Male	Female	Male	Female	Male	Female
Under 30 years old	Taiwan	44	10	36	9	15	6
	Overseas	38	10	28	4	36	3
30-50 years old	Taiwan	12	2	6	3	2	2
	Overseas	12	6	25	1	26	6
Over 50 years old	Taiwan	0	0	4	0	0	0
	Overseas	2	0	1	2	1	1
Total		108	28	100	19	80	18

Age Distribution of Employee Departures for 2018-2020

Unit: Number of People

Age Distribution	Region	2018		2019		2020	
		Male	Female	Male	Female	Male	Female
Under 30 years old	Taiwan	24	2	16	7	9	4
	Overseas	31	6	31	3	20	3
30-50 years old	Taiwan	10	2	21	0	16	1
	Overseas	25	6	17	3	23	2
Over 50 years old	Taiwan	1	0	8	0	10	1
	Overseas	1	0	1	2	1	3
Total		92	16	94	15	79	14

Note: The number of employee departures includes retirements, redundancies, deaths, part-time workers/consultant without renewal of contracts, and inter-company transfers within the Group.

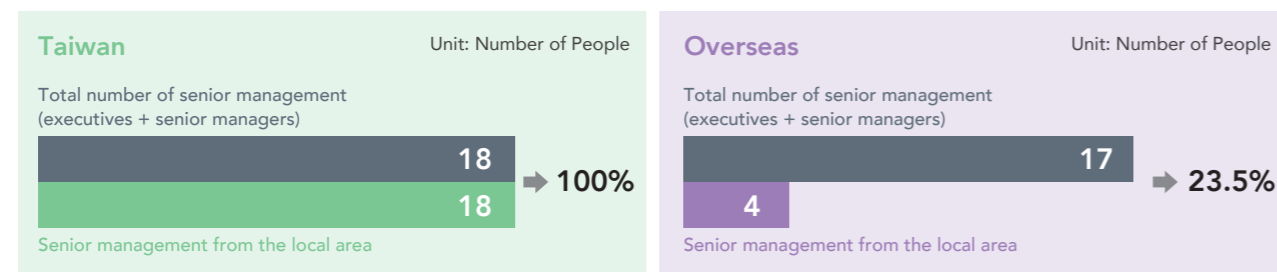
► Employee Job Rank Distribution for 2018-2020

Unit: Number of People

Rank	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Executive	10	0	9	0	9	0
Senior manager	28	1	26	1	25	1
Mid-level manager	32	4	35	4	36	4
Junior manager	74	13	72	14	75	14
General employees	1,258	182	1,267	181	1,278	180
Total	1,402	200	1,409	200	1,423	199

In 2020, percentage of the promotion of senior managers from local areas in Taiwan was 100% and 23.5% in overseas factories. The Company conducts all-round management competency training to cultivate top-notch local cadres.

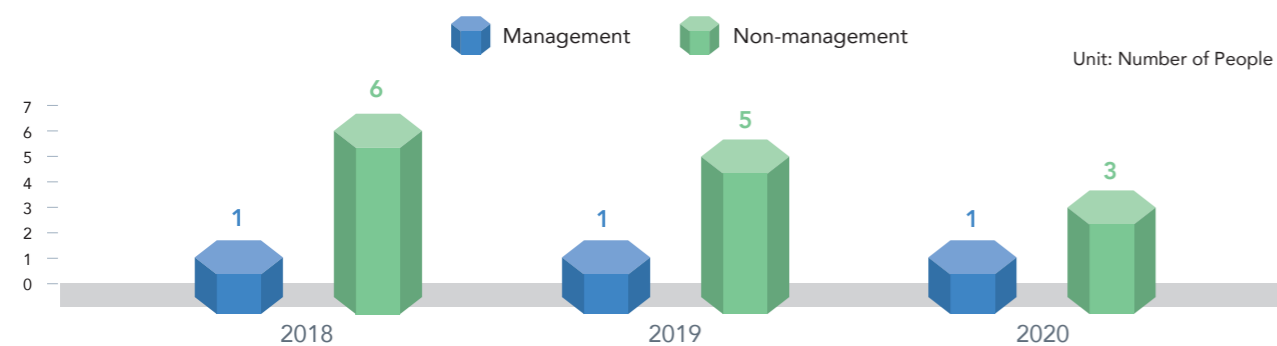
► 2020 Senior Management Distribution



Note: Management Role - entry-level manager (inclusive) and above; Non-management Role - general employee.

In an attempt to protect rights of those with physical or mental disabilities, DCC hired 4 people with disabilities in 2020, creating a friendly work environment. For those employees who are due to retire, we transfer them to a consulting role according to their area of expertise. By the end of 2020, we hired 3 retired employees as consultants to pass down their experience. These consultants are asked to attend a number of project meetings to offer their professional advice, or go to the production site to provide guidance and carry out internal departmental education and training. By doing this, they are able to contribute valuable knowledge and pass on their experience to further strengthen the Company.

► Employee Diversity Distribution for 2018-2020



4.2 Talent Cultivation and Development

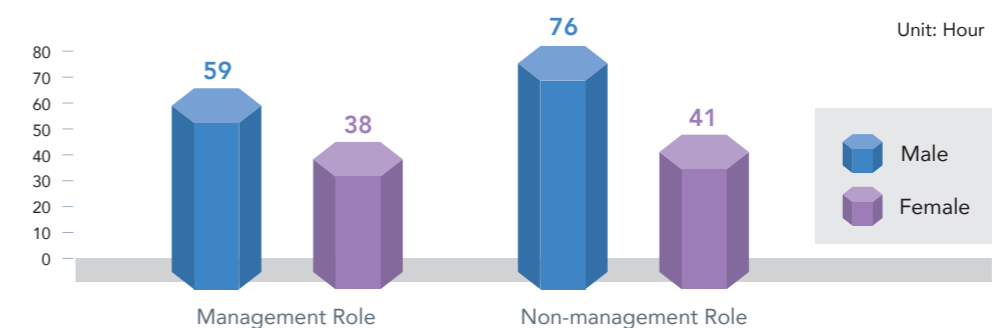
With talent capital being the foundation of sustainable development, DCC's success is based on the continuous development and cultivation of high quality talented elites. According to the six core competencies set by CCPG in 2016, we expect each employee to have the same common cultural notion, the same code of conduct and a consistent concept of value. The HR Development Committee was also formed in the same year. The President acts as the chair of the Committee, and discussion and plans are carried out with the HR Division Manager regarding issues of selection, education, employment and retention on a regular basis.

We continue the Group's development vision to expand our education and training system, and look forward to growing with each employee to further achieve the goals of the organization. The expansion of DCC's education and training system is as follows.



With the adoption "depth", "breadth" and "height", we carry out employee rotation and development training. The specific operations are "rooted in cultivation", "cross-departmental expansion" and "executive nurturing". "Rooted in cultivation" aims to improve the overall professional quality of colleagues through stringent and precise work drills, supplemented by the mentorship system; "cross-departmental expansion" provides opportunities for colleagues to participate in projects and overseas training to develop their international vision; while "executive nurturing" cultivates the management capabilities of officers at all levels, including foremen, managers, department managers and senior managers.

► 2020 average hours of training per year per employee



Note: Management Role - entry-level manager (inclusive) and above; Non-management Role - general employee.

Depending on the “target”, DCC’s education and training can be divided into the following two categories

I. Orientation Training for “New Employees”

We provide basic cognitive training necessary for new employees. According to the common scope of the Company, the training is divided into three categories: the Group’s common training (including professional functions), each unit’s common training (including factories and subsidiaries), and training within divisions (including divisions and other divisions in factories) so that each onboarding newcomers is equipped with complete and comprehensive education and training.

Since 2017, we have enforced the “mentorship system”. Senior colleagues from the same department or who graduated from the same school are arranged to serve as mentors to guide newcomers and help them to integrate into the organization and the workplace quickly and effectively. By the end of 2020, more than 72 colleagues served as mentors.



2020 Orientation Training for New Employees

II. Training on Core and Management Functions and Professional Functions for “Serving Colleagues”

Our serving colleagues focus on the training of “core functions and professional functions”. In 2020, the entire Group organized over 1,911 courses. Key training courses for each category is summarized as follows:

1. Managerial Personnel

Those who hold different managerial positions are provided with training that match their management functions so that they have the management knowledge, management skills, and behavioral patterns needed for their work tasks. More than 290 employees in the Group have participated in various management training, with an overall 4.6 satisfaction score out of 5.



Performance Goal Setting and Management Course for Managers

Senior Manager Leadership Seminar

In 2020, we planned AI and IoT information courses and finance courses to provide our senior managers with management tools including big data thinking as well as cost management. We synchronize our training with overseas managers through our video system, enabling uninterrupted learning.



2. Pre-assignment Training for Expatriates

Prior to sending our employees to an overseas factory, they are entitled to receive pre-assignment training for expatriates through e-Learning. On the platform, employees learn about the local personnel establishment, management policies, traffic and living environment and home leave. Meanwhile, the local company will also arrange senior Taiwanese cadres to offer guidance and support.

3. Various Compulsory and Professional Courses for Junior Engineers / Junior Administrators

In 2020, each Division scheduled a total of 113 compulsory courses for all engineers and managers. Senior colleagues also served as internal lecturers in order to pass down vital work functions and work experience to each Division. Furthermore, Divisions have also planned elective professional courses and each supervisor of the department has the flexibility to assign employees to attend physical or online courses.



Hands-on PowerPoint Skills Course



Hands-on PowerPoint Skills Online Course

Rooted in Education - DCCJS

In line with local government incentives, we have begun to apply the apprenticeship system. In 2020, we established contact with Yizheng Technician College and initiated the preliminary planning of the apprenticeship system. In the future, we will combine actual targets for further development while adopting the cultivation mode of “dual system of enterprise and school for integration engineering and learning” to jointly nurture technicians at middle and top level that meet the needs of the company.

4. Factory Personnel and Office Personnel Training

The HR Division plays the role of “collaborator” and provides training associated with statutory regulations, management tools and training planning. In 2018, a consensus meeting on the staff vitality of the HR Division and factories was held; in 2019, participation in the meeting was expanded for HR managers in overseas factories; and in 2020, the meeting was conducted through video. This approach enables the Group’s HR policy to be thoroughly implemented in each factory.

5. Internal Lecturer Training (Train the Trainer)

The internal lecturers are cultivated through curriculum planning, material editing and teaching to improve the training quality of the lecturer’s teaching skills, while also passing down the Group’s internal intellectual assets. In addition, we have established the “CCPG Shu-Ren Award” incentive mechanism to encourage knowledge sharing within the Group while increasing the passing down of experience. In 2020, a total of 21 colleagues were nominated for the award, including 7 mentors, 12 internal lecturers and 2 digital programmers.



2020 Training on Teaching Skill for Internal Lecturers



2020 CCPG Shu-Ren Award Winners

6. Training on the Group's Annual Core Function "Communication and Coordination"

In 2020, the theme launched by the HR Division was "communication". This includes courses of cross-departmental communication within the Group and contents of presentations for customers as well as contents of presentations for supervisors. By doing this, we improve the fluency of communication when carrying out conversations with others in the workplace, enhancing the overall effectiveness of communication.



Professional Presentation Skills for Sales Personnel



Cross-departmental Communication

◆ e-Learning Platform

We built the e-Learning system in 2016, which integrates the education and training databases of the Company all factories, allowing historical courses to be used for reference information for annual education and training courses after being collected, analyzed and integrated. The common courses on the e-Learning platform are also available for overseas employees. By the end of 2020, a total of 386 online courses that were either self-produced or as a result of cooperation with other agencies/organizations can be found on e-Learning.

To reach the goal of supplying our colleagues with more online learning resources, we also work with external online learning platforms including: CCPG Studio Classroom, CCPG Study Cube and CCPG EMBA Magazine.



Proactive cultivation of Japanese speaking talent - Dafa Factory and Kaohsiung Factory

As our factories engage in frequent technical exchanges with Japanese factories, in 2020, we set up basic and advanced Japanese language classes which were taken up by 60 employees. This strengthens our colleagues' Japanese language ability and helps them take in professional chemical technology when communicating with Japanese factories.



◆ Integrating Annual Education and Training Planning and Autonomous Internal Audit

The key to excel education and training results lies in the prior analysis of education and training needs and planning. Since 2019, each Division of CCPG annual education and training courses based on 6 education and training needs; each factory then plans annual education and training courses in conjunction with the policy and education and training plans promoted by each Division.



In addition, two key management audits are conducted on an annual basis. The Group's education and training is also be audited targeting the implementation status of the annual education and training plans proposed by each department and factory. In 2020, there were no material deficiencies.

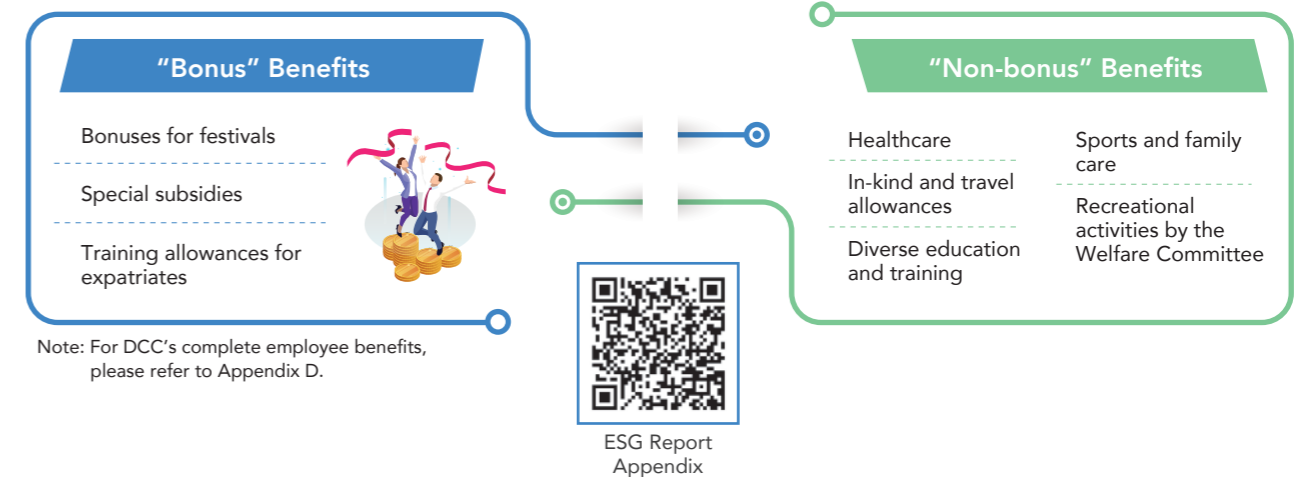


2020 Annual Education and Training Audit

4.3 Employee Care

At DCC, we care about employee salary and benefits and do our utmost to provide a work environment that balances work and life. Meanwhile, we have also various heart-warm welfare systems and physical and mental health care in place.

4.3.1 Employee Benefits



Employee Benefit Highlights of CCDSG

CCDSG is situated in the Jurong Industrial Park in the southwest of the main island of Singapore. The factory provides Jurong Island with subsidies offered to enhance employee loyalty. The employee, their spouses and children are also entitled to apply for medical subsidies from the factory each year.

Employee Family and Physical Care

In 2018, CCPG set up the “CCPG Good Mood Hotline” for employees in Taiwan and overseas to provide consultation services. Employees are able to receive counseling from professional counselling psychologists regarding health, life and work issues via telephone, Line, and WeChat. The content of counseling is kept confidential throughout the entire process, helping to solve any physical and mental issues our colleagues may have, retaining a friendly and harmonious workplace. In 2020, a total of 15 employees (3 in Taiwan and 12 overseas) used the counseling service.



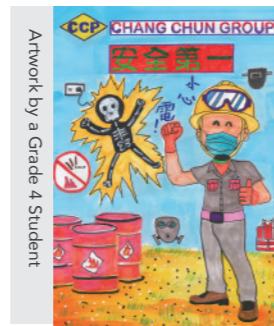
CCPG Good Mood Hotline

Painting CCPG - Parent-child Painting Activity

As a means to deepen the recognition of the Company by employees and their families, the second “Painting CCPG” held in 2020 echoed the Group’s objective to prioritize industrial safety, and “safety first” was used as the theme. The event saw the participation of many children and parents. A total of 185 paintings took part, expressing the creativity of families in color. (Note: Applicable in Taiwan)



As the 2020 “Paint CCPG” was being held, 50 winning works from 2019 were posted at the designated locations of the Taipei Head Office and each factory, showcasing the masterpieces of CCPG’s talented little artists.



Childbirth Incentive and Unpaid Parental Leave

On par with the government’s childbirth incentive policy, we provide a subsidy of NT\$20,000 per child as childbirth incentive and NT\$3,000/month childbirth allowance until the child reaches 2 years old. In 2020, 41 employees received childbirth incentive, totaling NT\$820,000 and childcare subsidies totaling NT\$860,000.

DCC encourages our colleagues to apply for unpaid leave to care for children according to their actual needs. We approve 100% of applications and 100% of their original duties are reinstated when they return to work so that they are able to look after their little ones with peace of mind.(Note: Applicable in Taiwan)



長春幸福企業<家庭生育獎勵制度>

生育獎金每胎20,000元(實發給2胎計算)
托兒津貼每月補助3,000元(補至實滿2歲止)

備註:
1. 本辦法自2018年1月1日起(不含)實施
2. 領取津貼者須為本公司正式員工(不含兼職人員)
3. 托兒津貼以實發給至實滿2歲止(不含)實施
4. 領取津貼者須為本公司正式員工(不含兼職人員)

生育獎勵領取範例說明

員工類別	領取津貼	生育獎金	托兒津貼
正式員工	2018/7/1起	✓	24個月全額補助
正式員工	2018/4/28起	✗	可領24個月津貼(含)前2個月)
正式員工	2018/4/21起	✗	可領24個月津貼(含)前2個月)
試用員工	2018/4/21起	✗	可領24個月津貼(含)前2個月)
留職停薪員工	2018/4/21起	✗	可領24個月津貼(含)前2個月)

備註: 1. 領取津貼者須為本公司正式員工(不含兼職人員)
2. 領取津貼者須為本公司正式員工(不含兼職人員)
3. 領取津貼者須為本公司正式員工(不含兼職人員)
4. 領取津貼者須為本公司正式員工(不含兼職人員)

CCPG Family Childbirth Incentive System

Unpaid Parental Leave Analysis in Taiwan for 2018-2020

Item	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Number of employees eligible for parental leave for the year (A)	128	5	146	7	124	6
Number of employees applying for parental leave for the year (B)	2	3	3	2	1	0
Number of employees reinstated after parental leave for the year (C)	1	3	6	3	0	0
Number of employees applying for reinstatement for the year (D)	1	3	6	3	0	0
Reinstatement rate(C/D)	100%	100%	100%	100%	-	-
Number of employees reinstated in the previous year (E)	2	0	1	3	6	3
Number of employees reinstated in the previous year and has been a full year (F)	2	0	1	2	5	2
Retention rate (F/E)	100%	-	100%	66.7%	83.3%	66.7%

Note 1: Reinstatement rate = Number of employees applying for reinstatement for the year/Number of people reinstated after parental leave for the year.

Note 2: Retention rate = Number of employees reinstated in the previous year and has been a full year / Number of people who have been reinstated in the previous year.

Parental (Maternity) Leave Analysis for Overseas for 2018-2020

Item	2018		2019		2020	
	Male	Female	Male	Female	Male	Female
Number of employees eligible for maternity leave for the year (A)	31	11	24	11	28	5
Number of employees for maternity leave for the year (B)	31	11	24	11	28	5
Number of employees reinstated from maternity leave for the year (C)	31	10	24	11	28	6
Number of employees applying for reinstatement for the year (D)	31	10	24	11	28	6
Reinstatement rate (D/C)	100%	100%	100%	100%	100%	100%
Number of employees reinstated in the previous year (E)	32	11	31	10	24	11
Number of employees reinstated in the previous year and has been a full year (F)	32	10	31	9	24	11
Retention rate (F/E)	100%	91%	100%	90%	100%	100%

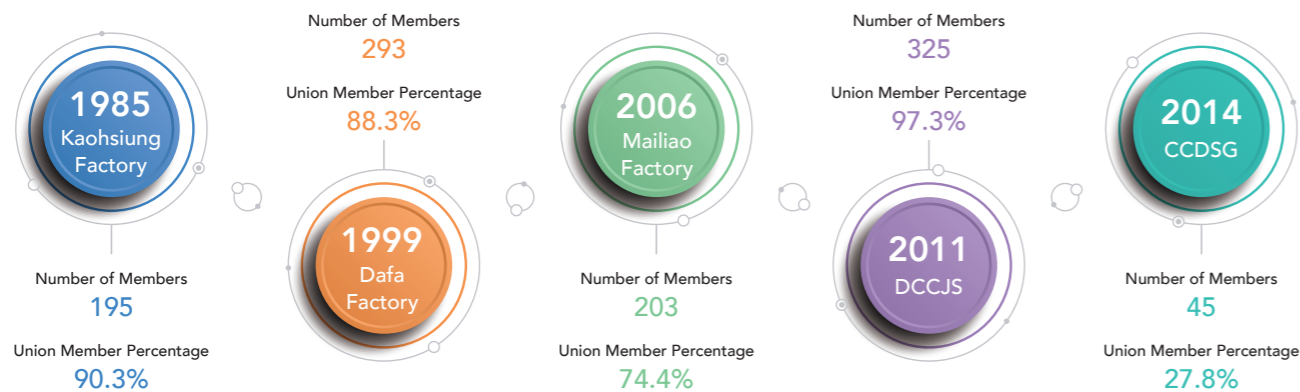
Note 1: Reinstatement rate = Number of employees applying for reinstatement for the year/Number of people reinstated after parental leave for the year.

Note 2: Retention rate = Number of employees reinstated in the previous year and has been a full year / Number of people who have been reinstated in the previous year.

◆ Harmonious Labor-management Relations and Communication Outlets Based on Mutual Trust

DCC earliest subordinate factory was established in 1985. A representative meeting is convened each year with each labor union, and our labor-management communication outlets are diverse and smooth.

▶ Labor Union Composition



To ensure smooth and transparent communication between labor and management, we have established a variety of labor-management communication outlets for resolving labor-management disputes and protecting and enhancing the rights and interests of our employees. In addition to the annual meeting of union representatives, meetings of union directors and supervisors, labor pension fund supervisory committee, and labor management, employees may also use telephone and Email as communication channels or engage in a face-to-face conversation through factory supervisors and union officers. Also, employees can also propose suggestions through the employee grievance channel. The topics for 2020 mainly included subsidies for softball tournaments, improvement of toilet facilities and working environment, upgrading of dormitory facilities in the factories and optimizing the attendance system, as well as suggestions on year-end bonuses and the margin for pay increases, and all outcomes have satisfied both labor and management.

Employee Retirement Protection

◆ Retirement Protection

To retire with peace of mind is a demonstration of CCPG's long-term care for our employees. For employees who are eligible for the new labor system at retirement, we have set up a Self-appropriation of 6+1 Reward Program; for employees who are eligible for the old system at retirement, we have set up a "Labor Retirement Reserve Supervision Committee" to supervise the utilization of employee pensions. Each year, we conduct regular annual actuarial calculations to ensure that the financial capacity of the Company is sufficient to cover employee pensions. Moreover, in thanks of the years of hard work of our retired employees, a solid gold coin with the text "CCP" engraved on it will be given at retirement.

The Self-appropriation of 6+1 New Pension System Reward Program

We encourage those employees eligible for the new labor system at retirement to place importance on the planning and protection of their retirement life. If an employee contributes 6% of their salary into their pension, the Company's statutory appropriation rate will increase by 1%, from 6% to 7% as an incentive. At DCC, the incentive began in February 2019 and as of the end of 2020, employees eligible for the new labor system contributing 6% of their salary grew from 110 to 433, accounting for 55% from 14%. (Note: Applicable in Taiwan)



"Appreciation for Twenty Years of Contribution"

An award ceremony of "Appreciation for Twenty Years of Contribution" is held each year for colleagues who have served in the Group for 20 years. In 2020, a total of 64 colleagues received the award and among them, 6 were selected and shared their thoughts on the 20-year journey, and witnessed together the growth of the Company and its colleagues.



Activities to Promote a Sports Enterprise

- ◆ Promotion of Sports Enterprise

In an effort to pass on the founder's sporting spirit to work with one another and never give up, while also providing employees with healthy and diverse recreational activities to exercise on a regular basis. By doing so, it increases the quality of the employee's work and life. In 2020, the Human Resource Department held the CCPG Badminton Tournament. After the preliminary rounds, the best players from each factory had the finals in Taipei on November 7, competing for a total prize of NT\$120,000. (Note: Applicable in Taiwan)



- ◆ “Running Together for Good Health” activity

Not only does exercise help the physical and mental health of employees, it also increases work performance and efficiency, enabling employees to learn with joy and are more willing to take on challenges. At DCC, we strive for cultivating a culture that promotes health, and we encourage our employees to have regular exercise habits. Each year, employees are entitled to a subsidy for the registration fee for running a marathon. We subsidized a total of 541 employees in 2020. (Note: Applicable in Taiwan)



Employees from the Taipei Company participating in the 2020 Happy Run organized by Raising Children Medical Foundation



Colleagues from the Mailiao Factory participating in the "2020 Beigang Mazu Cup National Marathon" held by Beigang Chaotian Temple



Colleagues from the Kaohsiung Factory participating in the "2020 Kaohsiung Anti-Drug Marathon" by Lions Clubs International



COVID-19 Protection

◆ Help Prevent the Spread of COVID-19

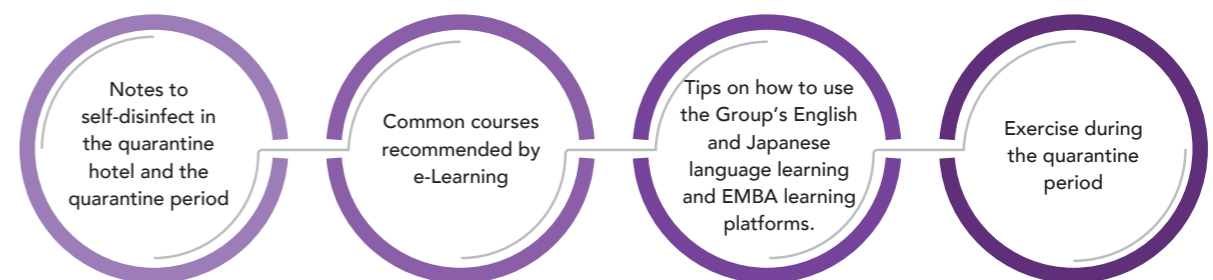
In 2020, COVID-19 severely impacted the entire world. During its peak, the Company purchased face masks for all colleagues and the workplace was regularly disinfected, ensuring the health of colleagues. Some colleagues were asked to work on different floors and offices or from home to prevent infection in groups.

In order to show our gratitude to expatriates for their dedication to duty during the outbreak, we offered an additional payment; employees returning to Taiwan for holidays received full subsidies for the quarantine hotel and expenses on PCR tests; and their holidays were extended when quarantine period was over, enabling to spend more time with their loved ones.



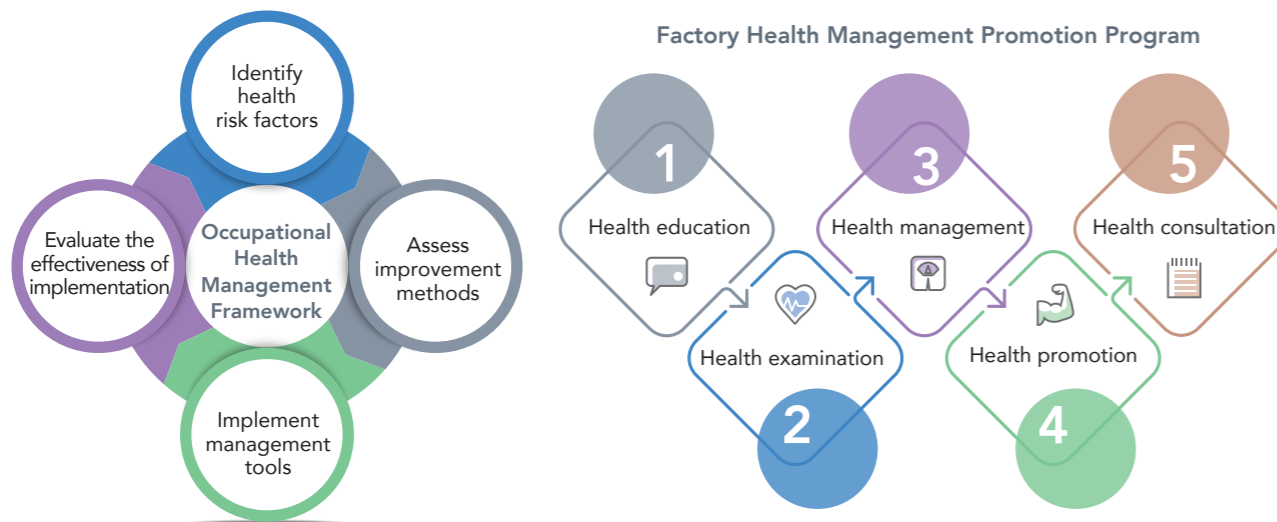
Exclusive Pandemic Prevention and Quarantine Tips

The Company provided the “Exclusive Pandemic Prevention and Quarantine Tips” to employees in quarantine to ensure that they looked after themselves during the period and seize the opportunity to enrich themselves, including:



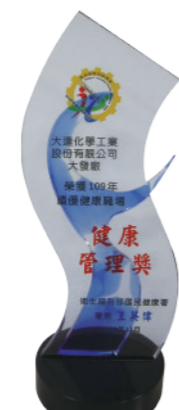
4.3.2 Healthcare

To implement a healthy workplace, DCC has complete management and execution measures from identifying health risk factors, assessing improvement methods, implementing management tools to evaluating the effectiveness of implementation through a systematic occupational health management framework. In order to provide our employees a healthy working environment and to achieve the above objectives, DCC has formulated health-related operating standards to carry out measures relating to the health of employees.



◆ Received the "Health Management Award" by Health Promotion Administration, Ministry of Health and Welfare

DCC's factories have established a health management promotion program based on the occupational health management framework. Internally, all employees participate in health promotion activities; externally, taking Dafa Factory as an example, these factories have established the entire factory's health management promotion program based on the systematic occupational safety management framework mentioned previously, supplemented by the health needs of factory employees. By doing this, the health of employees has gradually improved and a consensus on a healthy working environment built. In 2020, Dafa Factory stood out from all companies in Taiwan, and received the "Health Management Award" by Health Promotion Administration, Ministry of Health and Welfare.



Health Management Award - Dafa Factory



Dafa Factory received the 2020 Healthy Workplace Management Award

Dafa Factory - Drink More Water to be Healthy

The annual health examination results found that the proportion of abnormal uric acid among factory employees was as high as 38.4%. After performing an investigation, we realized that most employees did not drink enough water, hence the drive to organize a drinking-water competition with awards given. This promotion has seen more employees drinking more water which at the same time promoted metabolism. A total of 322 employees took part in the promotion, and the abnormal rate of serum urate levels dropped to 25.3% after the implementation, with a total decrease of 13.1%.



◆ Badge of Initiation of a Healthy Workplace

In 2020, Mailiao Factory attained the "Badge of Initiation Healthy Workplace" from the Health Promotion Administration through its drive of promoting a smoke-free and healthy workplace. By doing this, we improve the physical and mental health of employees aiming to create a healthy workplace through the joint participation of spouses of employees and contractors.



Mailiao Factory - Initiation of the Health Program

- 1** Weight loss program: A total of 67 colleagues took part in the program, losing a total of 125.9 kg with an average weight loss of 1.88 kg per person; the weight loss rate of the top three colleagues reached more than 10%. We provide various weight loss related activities such as yoga classes. Our colleagues have said that their neck and back pain caused by prolonged use of computers have improved. We also hold health and nutrition seminars, guiding our colleagues to choose healthy diets by demonstrating practical cooking and showing them nutrients of different types of foods.
- 2** Improved work overload: Screening employees with low risks of abnormal workload-promoted diseases and providing healthcare information; arranging occupational physician visits to promote health education to employees with mid-high risks of abnormal workload-promoted diseases; completion rate was 100%. By addressing work overload issues, we ensure the safety and physical and mental health of employees. In addition, we have also arranged a "breathing exercises to rid troubles" health seminar.
- 3** Essential oil massage class: The result of the musculoskeletal symptom survey suggested that 15 employees had back pain, while 11 had arm, neck and shoulder pain. Although the pain was not work-related, it has affected performance during work. The essential oil massage class was arranged to relieve the pain and discomfort.
- 4** Workplace health and hygiene course: "Hearing protection during noisy work" - professional physicians were arranged to give guidance to 8 employees separately. We also organized "prevention of unlawful acts when performing duties" course for senior managers.

◆ Health Management Promotion Program for Overseas Bases

Not only has DCC attained Health Management Awards and Badge of Initiation of a Healthy Workplace by the Health Promotion Administration, the health of employees overseas is equally important. By continuing to promote a variety health promotion programs, we can get a grasp of the health situation of our employees in overseas factories while constructing a trusting working environment that satisfies them. Take DCCM as an example, the implementation of our health management promotion program includes:

Monthly consultation with stationed physician to track the 3 major diseases after employees have received their health examinations. Spouses of employees are also entitled to the health examination and their health condition can be tracked on APP. There are blood pressure monitors available for employees.

Employee personal health monitoring data (including blood pressure and body composition) is recorded in AP Notes monthly.



Employees receive a health examination at the designated hospital yearly where they are also interviewed by professional physicians. Health status is monitored, and appropriate measures are taken based on the advice made by the physician.

Employees and their families enjoy medical benefits at designated clinics.



In terms of health management, we plan the short, and medium objectives for employees and contractors - the medium term plan is to fully investigate and evaluate chemical hazardous in workplace as well as controlling the exposure concentration to under 10% of the limit value; the long term plan is to develop a risk trend analysis of the top 5 diseases with the highest prevalence in DCC, and invest in health management to create a healthy working environment. The short-term implementation measures are as follows:

◆ Occupational Health Management Measures

An employee health management system has been built in DCC's enterprise resource planning (ERP). Employees' health management data over the years can be compiled and electronic within the system, enabling employees to check on changes in their medical examination data and pay attention to their health status at any time. By categorizing and grouping the health examination data, the clinical standards of the data can be confirmed, enabling the factory nurses to analyze the health examination data and evaluate the effectiveness of health management. DCC' ERP has now passed the ISO 27001 information security certification for 9 consecutive years. The medical examination data of our employees is safeguarded, so that there is no need for them to worry about data leaks.

The screenshot shows a software interface for managing employee health data. It includes a search bar at the top and a table with columns for employee ID, name, department, and various health metrics. The data is organized in a grid format, allowing for easy navigation and filtering.

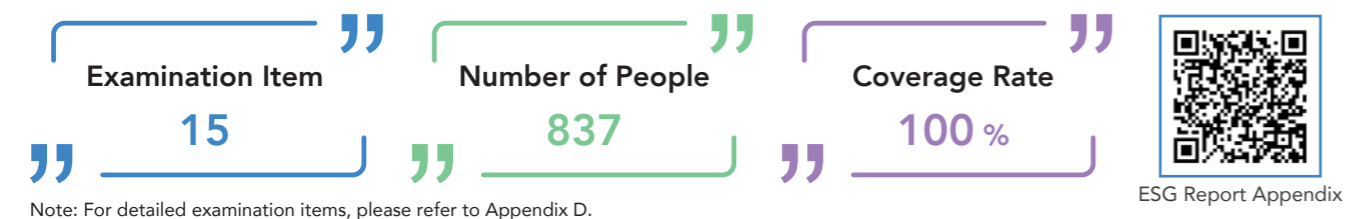
DCC's Employee Health Management System - all forms are electronic to effectively management statistics

◆ Inspection Management for Operations with Special Hazards to Health

At DCC, we are committed to identifying special health hazards in the workplace in each of Group's factories. We entrust two professional monitoring sectors which are accredited by the Occupational Safety and Health Administration to perform inspections in accordance with specific laws and regulations. Improvement, management and effectiveness of short and medium term objectives (full investigation and evaluation of chemical hazardous in workplace as well as controlling the exposure concentration to under 10% of the limit value) are carried out and assessed. Moreover, we also work with a team composed of professors and experts from various universities to discuss and determine inspection guidelines in order to make sure the actual status of the inspection performed by each factory is in accordance with the guidelines. The monitoring program and report of each factory is reviewed by the experts to strengthen the quality of inspection data for future assessments of health hazard risk exposure and engineering improvement effectiveness. In 2020, DCC completed the formulation of the Tender Acceptance Measures for the Inspection of Workplaces. The review of division of labor mechanism and results for the inspection of workplace in each factory of the Company will be conducted in accordance with these measures. See more of our entrusting sectors, please refer to Appendix D.

◆ Health Examination Management for Operations with Special Hazards

As required by the law, DCC provides an annual special hazard health examination to employees exposed to health hazards in the workplace. The actual working conditions of employees, the measured concentration of chemicals in the workplace and the volume used in operations are provided to the physician as basis for determining whether there is occupational exposure and whether the employee may develop diseases. For employees who show abnormalities in the results of the health examination, we take advice from the physician to improve the nature of the risk source or transfer the employee to another job. In 2020, the coverage rate of special hazard health examination conducted by DCC was 100%, with no special abnormalities found.



◆ COVID-19 Tiered Control Measures

In an effort to respond to the pandemic outbreak, DCC established tiered control measures. At the same time, we continued to follow the disease's channels of infection, where positive cases are located, the number of people being infected, the symptoms as well as preventive measures published by the CDC and make immediate reviews and adjustments. The execution and discontinuation of these adjustments are announced at the beginning and end of the outbreak. Each factory of DCC implements corresponding pandemic preventive measures according to the outbreak alert of the control measures; please refer to 3.1.3 Risk Management for more details.

◆ Emergency First Aid Response Training - Response Exercises for High-Risk Chemical Spill Accidents

In a bid to protect the health of our employees, emergency first aid training is necessary and practical in the matter of health education training. At DCC, we are dedicated to increase the importance of drills for high-risk chemical (e.g. hydrofluoric acid, phenol, and tetramethyl ammonium hydroxide) spill accidents. By formulating Standard Procedures for High-Risk Chemical Spills and regular exercises, the degree of injury after a high-risk chemical spill accident can be reduced. As of 2020, DCC completed the inventory of high-risk chemical substances in each factory, establishment of training materials and exercise scripts as well as education and training for healthcare personnel. We expect to complete education and training in each factory in 2021 and to include the response procedures into the factory's regular exercise scenarios while also formulating standard procedures for employees to carry out exercises on a regular basis, achieving the objective of reducing the degree of injuries.



Textbook Explanation



Academic Material Exercise

◆ Maternity in the Workplace

DCC takes pride in providing a quality healthy maternal environment for our female employees. In our factories, we have set up private rooms for breastfeeding or milk expressing in accordance with the Act of Gender Equality in Employment, Labor Health Protection Rules, and Standards for Establishment and Administration of Public Breastfeeding (Collecting) Rooms. Moreover, dedicated personnel have been designated to manage these rooms in accordance with the usage and cleaning maintenance regulations, enabling female employees, contractors or visitors during pregnancy or breastfeeding period to have a comfortable and private environment.

Moreover, for female employees returning to work after giving birth, departmental managers and factory healthcare personnel must adopt the hazard assessment, control and classification management measures for work that may pose a risk of maternal health hazards in accordance with the "Procedures for Implementing Maternal Health Protection for Female Workers". These female workers must not engage in work that may have adverse effects on maternal or infant health during the development of the embryo, pregnancy or breastfeeding period. According to clinical occupational physician's suitability assessment, protection measures including work adjustment or change of workplace must be adopted while also providing ongoing care and health education.



4.4 Community Relations

With DCC's social influence and linkage of the employee, the employee's families, local communities, schools and all types of organizations, coupled with efforts of factories in Taiwan and overseas, we hope to be closely interactive with communities. We also take the initiative to communicate with community residents of the risks of "process production safety", "air pollution" and "traffic safety". Through mutual friendly interaction, we hope to leave a brand-new image of the petrochemical industry to our neighboring residents. By taking this approach, we not only create economic value but also social value. For description related to community communication, please refer to 1.3.3 Response and Management of Major Incidents.

In response to the UN's 17 Sustainable Development Goals (SDGs), we assess the needs of our factories through surveys and interviews. Moreover, we focus on our 5 action axes of the common good values, including "1. Promoting Health and Welfare" in conjunction with SDG 3, "2. Cultivating Chemical Professionals" in conjunction with SDG 4, "3. Practicing New Perspectives of Responsible Production" in conjunction with SDG 12, "4. Strengthening the Environment, Safety and Health in the Industry" in conjunction with SDG 9, and "5. Integrating Community Capital and Communication" in conjunction with SDG 17.

In the future, we will emphasize the importance of these 5 action axes to proactively integrate internal and external resources, invest in different fields and work with local communities to jointly create a sustainable future. For content of 3. Practicing New Perspectives of Responsible Production, please refer to 1.2.1 Green Process and Green Products.

► 5 Axes of Social Cohesion

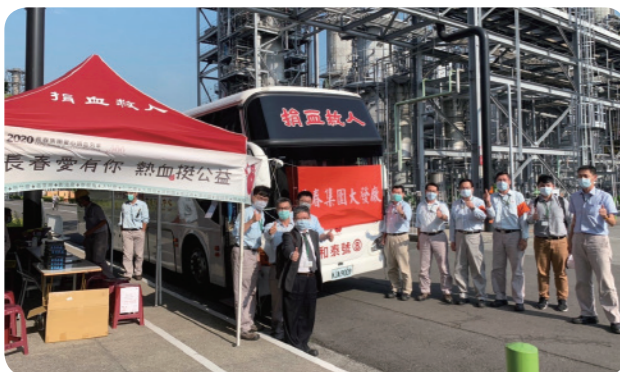


In 2020, DCC took part in and sponsored a total of 64 social contribution projects in Taiwan and overseas

◆ Promotion of Health and Welfare

Through its influence, DCC hopes not only to improve the health and safety of our employees but also to increase the health and environmental protection awareness in the local communities. In 2020, we organized many meaningful events including blood drives, mountain clean-ups and beach clean-ups. Through our actions, we aim to enhance and practice healthy living concepts and environmental awareness with employees and their families as well as local residents.

On par with the Group, 14 blood donation activities were carried out in DCC's factories in Taiwan, CCDPJ, and DCCJS in 2020. A total of 564 bags of blood were donated.



CCP, CCPC and DCC jointly held 2 beach clean-ups and 1 mountain clean-up in 2020. Our employees and their families were also invited to make a difference for a cleaner environment.

Beach Clean-up in Northern Taiwan

275 employees took part to remove 942 kg of garbage

DCC Taipei Company with CCP Hsinchu Factory and CCPC Miaoli Factory jointly cleaned the beach at Waipu Fishing Port. A total of 275 people participated in the collection of 942kg of rubbish.



Beach Clean-up in Central Taiwan

266 employees took part to remove 268 kg of garbage

A total of 266 people from Mailiao Factory and Changpin Factory participated in the beach clean-up collecting 268kg of rubbish.



Mountain Clean-up in Southern Taiwan

780 employees took part

A mountain clean-up activity was jointly organized by the Dafa Factory, Kaohsiung Factory, CCP Kaohsiung Factory and Dashe District Office. A total of 780 employees, family members and volunteers from the Community Development Association of Dashe District participated to clean up rubbish in Guanyin Mountain Scenic Area in a bid to restore the beauty of nature.



◆ Cultivation of Chemical Professionals

The thriving development of the industry is based on continuous remarkable talent. DCC makes efforts and contributions via its core competency and resources of the industry when it comes to the promotion of education. Moreover, we constantly build close relations with local schools and help students gain more industry-related knowledge and industry development status in order to spark their interest in the petrochemical industry while cultivating skilled talent capital in the industry.

We also provide internships to strengthen the skills of students in terms of corporate practices. By doing so, we enable them to understand more about DCC.

“

In order to achieve the vision of “train locally and hire locally”, CCP Kaohsiung Factory, DCC Kaohsiung Factory, alongside 13 manufacturers from Renda Industrial Park, sponsored Renwu High School’s “Petrochemical Industry and Learning Special Class”, in 2020 to revitalize the regional economy, promote local development as well as helping to reduce the phenomenon of migration. Through the use of industry resources, government and academia, teaching and learning can be revitalized, the gap between cities and towns shortened and jobs secured, creating a 3-win situation. At the same time, we can also develop students’ scientific and rational thinking, truth-seeking and curiosity regarding local affairs.

One of the students who graduated from the class took an internship at CCP Kaohsiung Factory in the summer of 2020 to learn and gain chemical knowledge.



Kaohsiung Factory invited professors and students at National University of Kaohsiung for a visit to the factory to enable them to understand that chemicals products are closely connected to our day-to-day life.



Furthermore, CCDPJ has been working hard to build the “Communication and Employment Platform” with the university in order to strengthen the communication between the Company and school. 13 new employees were recruited via campus promotion seminars and online interviews.

► Distribution of Summer Interns in 2020

Changpin Factory	Mailiao Factory	Total Number of People
2	1	3

Note: In 2020, Changpin Factory planned to build a new DCC factory and established a DCC workforce. Under the Group's planning, DCC was merged by CCPC in 2021.

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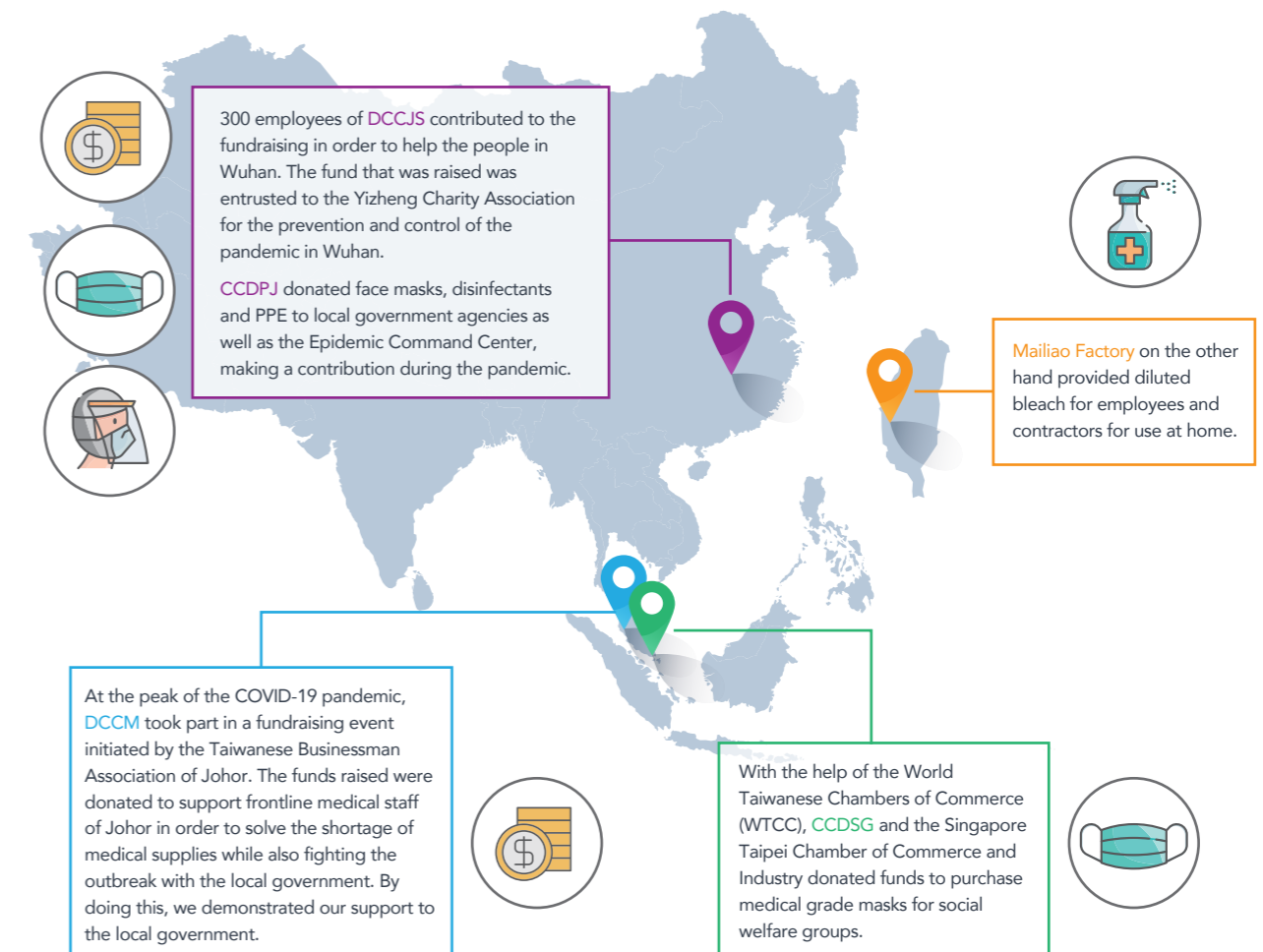
◆ Strengthening Environment, Health, and Safety in the Industry

“Environmental Protection as Priority and Safety First” is the duty-bound responsibility and obligation of operators and employees since establishment. As a member of CCPG, DCC share our expertise in industrial safety, and hope to be jointly committed to maintaining the environmental safety of community residents with local governments and communities.

During firefighting, firefighter suits and trousers may get contaminated and require washing frequently to protect the health of the users. Mailiao Factory donated 51 sets of firefighter suits to firefighters in Yunlin so that they have ample replacements, avoiding the situation of running out of equipment.



With the world severely affected by the COVID-19 outbreak in 2020, we have been doing our utmost to prevent the spread, fulfilling our corporate social responsibilities and providing a variety of pandemic prevention materials to government departments and local communities. Helping the effort to prevent the disease together with the government and the public.



◆ Integrating Community Capital and Communication

DCC take the initiative to hold or participate in events held in communities according to the needs of local people. By doing this, we bring the company and local residents closer together while maintaining diverse and smooth communication outlets with the chief of the village, responsible person of the community as well as the residents.

In addition, we provide resources to give back to society, including donating funds or supplies to social welfare groups, adopting school lawns in the hope to inject society with the spread of goodwill.

“ Helping the Disadvantaged



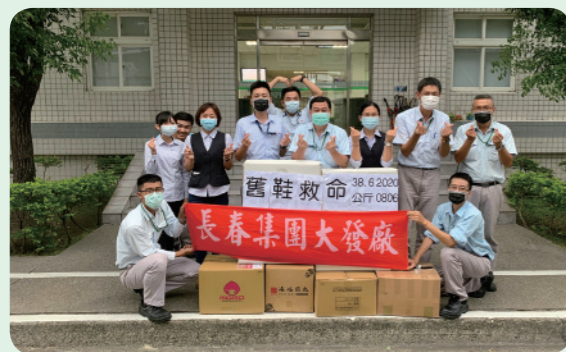
Sponsoring disadvantaged families

To fulfill our social responsibilities, Kaohsiung Factory and the Taishe Industrial Park Manufacturing Association jointly sponsor disadvantaged families.



Sending Winter Warmth to the Disadvantaged

Dafa Factory and Daliao District Office combined the nearby village offices to jointly organize the “Sending Winter Warmth to the Disadvantaged” event to care for those who are less fortunate.



Dafa Welfare Association

Dafa Factory employees donated used shoes to people in remote areas in Africa as a means to prevent them from getting barefoot injuries.



Donating money and supplies

Dafa Factory employees also put together the welfare association and donated materials and funds to orphanages and Special Education School in order to encourage employees of the Company to take the initiative and help disadvantaged groups.



Visited Several Local Orphanages and Social Welfare Organizations

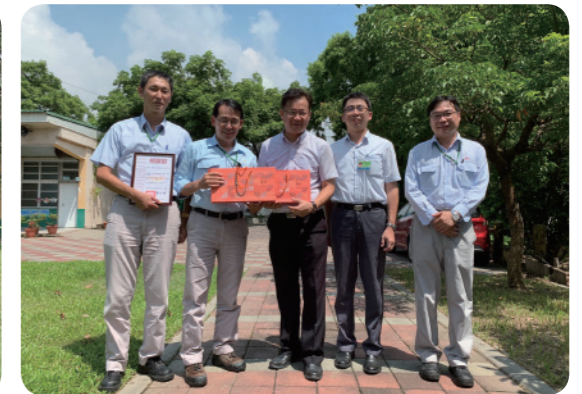
During October and November 2020, DCCM visited several local orphanages and social welfare organizations. Not only were daily necessities donated, subsidies for education and medicines were also provided, bringing warmth to children in need through positive actions.

“ Caring for Students



Adopt Lawns in Elementary Schools

With the ongoing adoption of 100 pings (331 square meters) of lawn in Zhaoming Elementary School in Daliao District, Dafa Factory has made an extraordinary effort to enable children to learn happily in a green environment.



Regular Donation

The Love Club set up Mailiao Factory makes a periodic contribution to children of Family Support Centers so that they can go to school with peace of mind and grow up happily.

“ Community Prosperity



Bring Zongzi to the Community

DCCJS has worked with the Sunshine Community to carry out a Dragon Boat Festival Event - “Bring Zongzi to the Community” which saw many Zongzi being made for the elderly in the local area, building a closer relationship with the residents.



Fun Stone Painting

DCCJS partnered up with the local library and the Sunshine Community for the “Fun Stone Painting” event, in which 20 children participated. Through painting on stones, children were inspired to show their creativity. This event has also prompted communication with the community.



Clean Up the Surrounding Area of the Factory

Dafa Factory has chosen 21 employees to clean up the surrounding area of the factory and they have removed approximately 80kg of garbage.



Visit of the care home

During the visit of the care home, employees of CCDPJ also made dumplings with the elderly, bringing warmth to the elderly via actions.

”

Appendix 1: GRI Standards Corresponding Table

General Disclosures

GRI Standards	Topic-specific disclosures	Chapter	Page
102-1	Name of the organization	1.1 About DCC	8
102-2	Activities, brands, products, and services	1.1 About DCC 1.1.1 Key Products and Location of Operation	8 9
102-3	Location of headquarters		
102-4	Location of operations	1.1.1 Key Products and Location of Operation	9
102-5	Ownership and legal form		
102-6	Markets served	1.1.1 Key Products and Location of Operation	9
102-7	Scale of the organization	1.1.1 Key Products and Location of Operation 1.1.2 Operating Performance	9 12
102-8	Information on employees and other workers	4.1.2 Composition of Talent	99
102-9	Supply chain	3.2 Sustainable Supply Chain Management	80
102-10	Significant changes to the organization and its supply chain	No significant changes in 2020	-
102-11	Precautionary Principle or approach	3.1.3 Risk management 2.2 Climate-related Risks and Opportunities	73 46
102-12	External initiatives	3.3 Stakeholder Communication	88
102-13	Membership of associations		
102-14	Statement from senior decision-maker	Message from the Operator	4
102-15	Key impacts, risks, and opportunities	3.1.3 Risk management	73
102-16	Values, principles, standards, and norms of behavior	3.1.3 Risk management	73
102-17	Mechanisms for advice and concerns about ethics		
102-18	Governance structure	3.1.2 Corporate Governance 3.1.1 Sustainability Strategy	72 66
102-19	Delegating authority		
102-20	Executive-level responsibility for economic, environmental, and social topics	3.1.1 Sustainability Strategy	66
102-24	Nominating and selecting the highest governance body	3.1.2 Corporate Governance	72
102-40	List of stakeholder groups	3.3 Stakeholder Communication	88
102-41	Collective bargaining agreements	4.3.1 Employee Benefits	107
102-42	Identifying and selecting stakeholders		
102-43	Approach to stakeholder engagement	3.3 Stakeholder Communication 3.4 2020 Material Sustainability Topics	88 92
102-44	Key topics and concerns raised		
102-45	Entities included in the consolidated financial statements	About this Report 1.1.2 Operating Performance	2 12

GRI 102:
General
Disclosures
2016

GRI Standards	Topic-specific disclosures		Chapter	Page
GRI 102: General Disclosures 2016	102-46	Defining report content and topic Boundaries	3.3 Stakeholder Communication 3.4 2020 Material Sustainability Topics	88
	102-47	List of material topics		92
	102-48	Restatements of information	-	-
	102-49	Changes in reporting	3.4 2020 Material Sustainability Topics	92
	102-50	Reporting period	About this Report	2
	102-51	Date of most recent report		
	102-52	Reporting cycle		
	102-53	Contact point for questions regarding the report		
	102-54	Claims of reporting in accordance with the GRI Standards		
	102-55	GRI content index	Appendix 1: GRI Standards Corresponding Table	125
	102-56	External assurance	Appendix 3: Assurance Report of CPAs' Independence	132

Specific Topic

* Material topic

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Legal compliance*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	3.1.3 Risk management	73
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
	GRI 205: Anti-corruption 2016	205-3	Confirmed incidents of corruption and actions taken	3.1.3 Risk management	73
	GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	3.3 Stakeholder Communication	44
				2.1 Environment Protection Strategy	88
	GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	3.3 Stakeholder Communication	88

GRI 200: Economic

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Economic Performance	GRI 201: Economic Performance 2016	201-2	Financial implications and other risks and opportunities due to climate change	2.2 Climate-related Risks and Opportunities	46
		201-3	Defined benefit plan obligations and other retirement plans	4.3.1 Employee Benefits	107
Market Presence	GRI 202: Market Presence 2016	202-2	Proportion of senior management hired from the local community	4.1.2 Composition of Talent	99

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Procurement Practices	GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	3.2 Sustainable Supply Chain Management	80
Anti-corruption	GRI 205: Anti-corruption 2016	205-2	Communication and training about anti-corruption policies and procedures	3.1.3 Risk management	73
		205-3	Confirmed incidents of corruption and actions taken	3.3 Stakeholder Communication	88

GRI 300: Environmental

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Energy	GRI 302: Energy 2016	302-1	Energy consumption within the organization	2.3.2 Energy Conservation and Carbon Reduction Actions	51
		302-4	Reduction of energy consumption		
		302-5	Reductions in energy requirements of products and services		
Water and Effluents	GRI 303: Water and Effluents 2018	303-2	Management of water discharge-related impacts	2.4.3 Wastewater Management	58
		303-3	Water Withdrawal	2.4.1 Water Resource Risk Management	54
				2.4.2 Water Consumption Management	55
		303-4	Water Discharge	2.4.1 Water Resource Risk Management	54
		303-5	Water Consumption	2.4.3 Wastewater Management	58
Air emission management*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	2.5.1 Air pollutant emission management	59
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
	GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	2.3.1 GHG Emission Management	49
		305-2	Indirect (Scope 2) GHG emissions		
		305-5	Reduction of GHG emissions	2.3.2 Energy Conservation and Carbon Reduction Actions	51
		305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	2.5.1 Air pollutant emission management	59
Effluents and Waste	GRI 306: Effluents and Waste 2016	306-2	Waste by type and disposal method	2.5.2 Waste management	62
Environmental Compliance	GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	2.1 Environment Protection Strategy	44
				3.3 Stakeholder Communication	88

GRI 400: Social

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Employment	GRI 401: Employment 2016 (containing Standard Interpretation 1)	401-1	New employee hires and employee turnover	4.1.2 Composition of Talent	99
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.3.1 Employee Benefits Appendix D	107
		401-3	Parental leave		
Labor/ Management Relations	GRI 402: Labor/ Management Relations 2016	402-1	Minimum notice periods regarding operational changes	4.3.1 Employee Benefits	107
Occupational safety and health*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	1.3.2 Occupational and Process safety	27
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
	GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	1.3.2 Occupational and Process safety Appendix A	27
		403-2	Hazard identification, risk assessment, and incident investigation		
		403-3	Occupational health services	4.3.2 Healthcare	114
		403-4	Worker participation, consultation, and communication on occupational health and safety	1.3.2 Occupational and Process safety	27
		403-5	Worker training on occupational health and safety	1.3.3 Response and management of major incidents	35
		403-6	Promotion of worker health	4.3.2 Healthcare	114
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	3.2.2 Supplier management system 1.3.2 Occupational and Process safety	27 83
		403-8	Workers covered by an occupational health and safety management system	1.3.2 Occupational and Process safety	27
		403-9	Work-related injuries		
		403-10	Work-related ill health		
Training and Education	GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	4.2 Talent Cultivation and Development	103
		404-2	Programs for upgrading employee skills and transition assistance programs		
		404-3	Percentage of employees receiving regular performance and career development reviews		
Diversity and Equal Opportunity	GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	4.1.2 Composition of Talent	99
Non-discrimination	GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	3.3 Stakeholder Communication 4.1.2 Composition of Talent	88 99

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Child Labor	GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	4.1.1 Human Resources Policy	98
Forced or Compulsory Labor	GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	4.1.1 Human Resources Policy	98
Human Rights Assessment	GRI 412: Human Rights Assessment 2016	412-2	Employee training on human rights policies or procedures	4.1.1 Human Resources Policy	98
Supplier Social Assessment	GRI 414: Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	3.2.2 Supplier management system	83
Product quality and safety* Chemical Management*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	1.3.1 Chemical management	23
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
	GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories		
Product quality and safety* Chemical Management*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	1.2.2 Product quality management	18
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
	GRI 417: Marketing and Labeling 2016	417-1	Requirements for product and service information and labeling		
Customer Privacy	GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	1.2.3 Customer Service	21
Socioeconomic Compliance	GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	3.3 Stakeholder Communication	88

DCC's Specific Topics

Topic	GRI Standards	Topic-specific disclosures		Chapter	Page
Corporate governance and integrity*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	3.1.2 Corporate Governance	72
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		
Response and management of major incidents*	GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its Boundary	1.3.3 Response and management of major incidents	35
		103-2	The management approach and its components		
		103-3	Evaluation of the management approach		

Appendix 2: SASB Corresponding Table

TOPIC	CODE	CATEGORY	ACCOUNTING METRIC	Corresponding Chapters	Page
Greenhouse Gas Emissions	RT-CH-110a.1	Quantitative	Gross global Scope 1 GHG emissions (tCO ₂ e), percentage covered under GHG emissions-limiting regulations	2.3 GHG Management	49
	RT-CH-110a.2	Discussion and Analysis	Discussion of strategy or plan to manage Scope 1 GHG emissions, emissions reduction targets, and an analysis of performance against those targets	2.3 GHG Management	49
Air Quality	RT-CH-120a.1	Quantitative	Air emissions of the following pollutants: (1) NOX (excluding N ₂ O), (2) SOX, (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	2.5 Discharge Management	59
Energy management	RT-CH-130a.1	Quantitative	(1) Total energy consumed (GJ), (2) percentage grid electricity (%), (3) percentage renewable (%), (4) total self-generated energy (GJ)	2.3 GHG Management	49
Water Management	RT-CH-140a.1	Quantitative	(1) Total water withdrawn, (2) total water consumed, (3) operating sites in "high" or "very high" water shortage areas and the proportion of (1) and (2)	2.4 Water resources management	54
	RT-CH-140a.2	Quantitative	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	2.1 Environment Protection Strategy 2.4 Water resources management	44 54
	RT-CH-140a.3	Discussion and Analysis	Description of water management risks and discussion of strategies and practices to mitigate those risks	2.4 Water resources management	54
Hazardous Waste Management	RT-CH-150a.1	Quantitative	Amount of hazardous waste generated, percentage recycled	2.5 Discharge Management	59
Community Relations	RT-CH-210a.1	Discussion and Analysis	Discussion of engagement processes to manage risks and opportunities associated with community interests	4.4 Community Relations	118
Workforce Health & Safety	RT-CH-320a.1	Quantitative	(1) Total recordable incident rate (TRIR) and (2) fatality rate for direct employees and contract employees	1.3 Occupational Health and Safety	23
	RT-CH-320a.2	Discussion and Analysis	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	1.3 Occupational Health and Safety 4.3 Employee Care	23 107
Product Design for Use-phase Efficiency	RT-CH-410a.1	Quantitative	Revenue from products designed for use-phase resource efficiency	1.2 Green Products and Service Quality	14

TOPIC	CODE	CATEGORY	ACCOUNTING METRIC	Corresponding Chapters	Page
Safety & Environmental Stewardship of Chemicals	RT-CH-410b.1	Quantitative	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	1.3 Occupational Health and Safety	23
	RT-CH-410b.2	Discussion and Analysis	develop alternatives with reduced human and/or environmental impact.	1.3 Occupational Health and Safety	23
Genetically Modified Organisms	RT-CH-410c.1	Quantitative	Percentage of products by revenue that contain genetically modified organisms (GMOs)	DCC does not use genetically modified organisms	-
Management of the Legal & Regulatory Environment	RT-CH-530a.1	Discussion and Analysis	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	2.3 GHG Management	49
Operational Safety, Emergency Preparedness & Response	RT-CH-540a.1	Quantitative	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	1.3 Occupational Health and Safety	23
	RT-CH-540a.2	Quantitative	Number of transport incidents	3.2 Sustainable Supply Chain Management	80

Appendix 3: Assurance Report of Independent Auditors



安永諮詢服務股份有限公司

11012 台北市基隆路一段333號8樓
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會計師獨立確信報告

大連化學工業股份有限公司 公鑒

一、確信範圍

本事務所接受大連化學工業股份有限公司之委託，對 2020 年度企業社會責任報告書中所選定之永續績效資訊進行有限確信並出具報告。

有關大連化學工業股份有限公司所選定之標的資訊及其適用基準，詳附件一。

管理階層責任

大連化學工業股份有限公司管理階層應依據適當之基準編製 2020 年度企業社會責任報告書，包括參考全球永續性報告協會(Global Reporting Initiatives, GRI)發布之 GRI 準則(GRI Standards)，並應設計、執行及維護與報告編製相關之內部控制，以蒐集並揭露報告書內容。

本事務所責任

本事務所係依照財團法人中華民國會計研究發展基金會所發布之確信準則公報第一號「非屬歷史性財務資訊查核或核閱之確信案件」之要求規劃並執行有限確信工作。

二、確信工作

有限確信案件中執执行程序之性質及時間與適用於合理確信案件不同，其範圍亦較小，所取得之確信程度明顯低於合理確信案件。為取得有限確信，本事務所於決定確信程序之性質及範圍時曾考量大連化學工業股份有限公司內部控制之有效性，但目的並非對大連化學工業股份有限公司內部控制之有效性表示意見。

為作成有限確信之結論，本事務所已執行下列工作：

- 與大連化學工業股份有限公司之管理階層及員工進行訪談，以瞭解大連化學工業股份有限公司履行社會責任之整體情況，以及報導流程。
- 透過訪談、檢查相關文件，以瞭解大連化學工業股份有限公司之主要利害關係人及利害關係人之期望與需求、雙方具體之溝通管道，以及大連化學工業股份有限公司如何回應該等期望與需求。
- 針對報告中所選定之永續績效資訊進行分析性程序；蒐集並評估其他支持證據資料及所取得之管理階層聲明；如必要時，則抽選樣本進行測試。
- 閱讀大連化學工業股份有限公司之企業社會責任報告書，確認其與本事務所取得關於社會責任整體履行情況之瞭解一致。

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三、先天限制

因社會責任報告中所包含之非財務資訊受到衡量不確定性之影響，選擇不同的衡量方式，可能導致績效衡量上之重大差異，且由於確信工作係採抽樣方式進行，且任何內部控制均受有先天限制，故未必能查出所有業已存在之重大不實表達，無論是導因於舞弊或錯誤。

四、品質管制與獨立性

本事務所遵循審計準則公報第四十六號會計師事務所之品質管制之規範，建立並維護完整之品質管制制度，包含遵循職業道德規範、專業準則及所適用法令相關之書面政策及程序。本所亦遵循會計師職業道德規範中有關獨立性及其他道德規範之規定，該規範之基本原則為正直、公正客觀、專業能力及盡專業上應有之注意、保密及專業態度。

五、結論

依據本事務所執行之程序及所獲取之證據，未發現大連化學工業股份有限公司所選定之永續績效資訊有未依照適用基準編製而須作重大修正之情事。

安永聯合會計師事務所

會計師：林麗鳳

林麗鳳



民國一一〇年七月九日

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附件一

編號	頁次	內文章節	標的資訊	適用基準																																
1	29	1.3.2 職場與製程安全	<div>2020 年工傷統計各項指標</div> <table><tr><th>項目/性別</th><th>男</th><th>女</th><th>合計</th></tr><tr><td>死亡數</td><td>0</td><td>0</td><td>0</td></tr><tr><td>嚴重的職業傷害人數</td><td>1</td><td>0</td><td>1</td></tr><tr><td>可記錄之職業傷害人數</td><td>12</td><td>0</td><td>12</td></tr><tr><td>職業傷害所造成的死亡比率</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>嚴重的職業傷害比率</td><td>0.07</td><td>0.00</td><td>0.06</td></tr><tr><td>可記錄之職業傷害比率</td><td>0.80</td><td>0.00</td><td>0.71</td></tr><tr><td>工作總時數</td><td>3,000,838</td><td>401,786</td><td>3,402,624</td></tr></table>	項目/性別	男	女	合計	死亡數	0	0	0	嚴重的職業傷害人數	1	0	1	可記錄之職業傷害人數	12	0	12	職業傷害所造成的死亡比率	0.00	0.00	0.00	嚴重的職業傷害比率	0.07	0.00	0.06	可記錄之職業傷害比率	0.80	0.00	0.71	工作總時數	3,000,838	401,786	3,402,624	臺灣地區依據通報勞動部職業災害資料統計。大陸廠區依據通報人力資源和社會保障行政部門資料統計。
項目/性別	男	女	合計																																	
死亡數	0	0	0																																	
嚴重的職業傷害人數	1	0	1																																	
可記錄之職業傷害人數	12	0	12																																	
職業傷害所造成的死亡比率	0.00	0.00	0.00																																	
嚴重的職業傷害比率	0.07	0.00	0.06																																	
可記錄之職業傷害比率	0.80	0.00	0.71																																	
工作總時數	3,000,838	401,786	3,402,624																																	
2	86	3.2.2 供應商管理體系	<div>2020 年大連化工對承攬商的訓練時數統計</div> <table><tr><th>項目/性別</th><th>男</th><th>女</th><th>合計</th></tr><tr><td>訓練時數</td><td>4,851</td><td>320</td><td>5,171</td></tr><tr><td>年底人次</td><td>4,851</td><td>320</td><td>5,171</td></tr><tr><td>平均時數</td><td>1</td><td>1</td><td>1</td></tr></table>	項目/性別	男	女	合計	訓練時數	4,851	320	5,171	年底人次	4,851	320	5,171	平均時數	1	1	1	承攬商勞工安全衛生教育課程統計時數及人次。																
項目/性別	男	女	合計																																	
訓練時數	4,851	320	5,171																																	
年底人次	4,851	320	5,171																																	
平均時數	1	1	1																																	
3	103	4.2 人才培育與發展	<div>2020 年教育訓練每人平均時數</div> <div>單位：小時</div> <table><tr><th>性別/類別</th><th>管理階層</th><th>非管理階層</th></tr><tr><td>男</td><td>59</td><td>76</td></tr><tr><td>女</td><td>38</td><td>41</td></tr></table>	性別/類別	管理階層	非管理階層	男	59	76	女	38	41	長春 e 學院系統匯出資料。																							
性別/類別	管理階層	非管理階層																																		
男	59	76																																		
女	38	41																																		
4	75	3.1.3 風險管理	<div>2020 年法令遵循與反貪腐教育訓練 員工完成受訓百分比</div> <table><tr><td>管理階層</td><td>98.2%</td></tr><tr><td>非管理階層</td><td>98.4%</td></tr></table>	管理階層	98.2%	非管理階層	98.4%	長春 e 學院系統匯出資料。																												
管理階層	98.2%																																			
非管理階層	98.4%																																			



5	57	2.4.2 用水管理	<div>2020年取水量統計</div> <table><tr><th>項目</th><th>單位：百萬公升</th></tr><tr><td>自來水使用量</td><td>5,251</td></tr><tr><td>水庫水使用量</td><td>0</td></tr><tr><td>井水使用量</td><td>0</td></tr><tr><td>河水使用量</td><td>2,312</td></tr><tr><td>地下水使用量</td><td>0</td></tr><tr><td>雨水使用量</td><td>150</td></tr><tr><td>外購蒸汽冷凝水</td><td>845</td></tr><tr><td>外購純水</td><td>818</td></tr><tr><td>外售純水(-)</td><td>0</td></tr><tr><td>取用水總量</td><td>9,376</td></tr></table>	項目	單位：百萬公升	自來水使用量	5,251	水庫水使用量	0	井水使用量	0	河水使用量	2,312	地下水使用量	0	雨水使用量	150	外購蒸汽冷凝水	845	外購純水	818	外售純水(-)	0	取用水總量	9,376	購買純水、蒸氣發票開立資訊統計。 用水證明文件統計。 雨水回收資料統計。
項目	單位：百萬公升																									
自來水使用量	5,251																									
水庫水使用量	0																									
井水使用量	0																									
河水使用量	2,312																									
地下水使用量	0																									
雨水使用量	150																									
外購蒸汽冷凝水	845																									
外購純水	818																									
外售純水(-)	0																									
取用水總量	9,376																									



Dairen Chemical Corporation

