中國建築國際集團有限公司

CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED

（於開曼群島註冊成立之有限公司）

（Incorporated in the Cayman Islands with limited liability）

Leaping Towards a Sustainable Future

2021 Sustainability Report

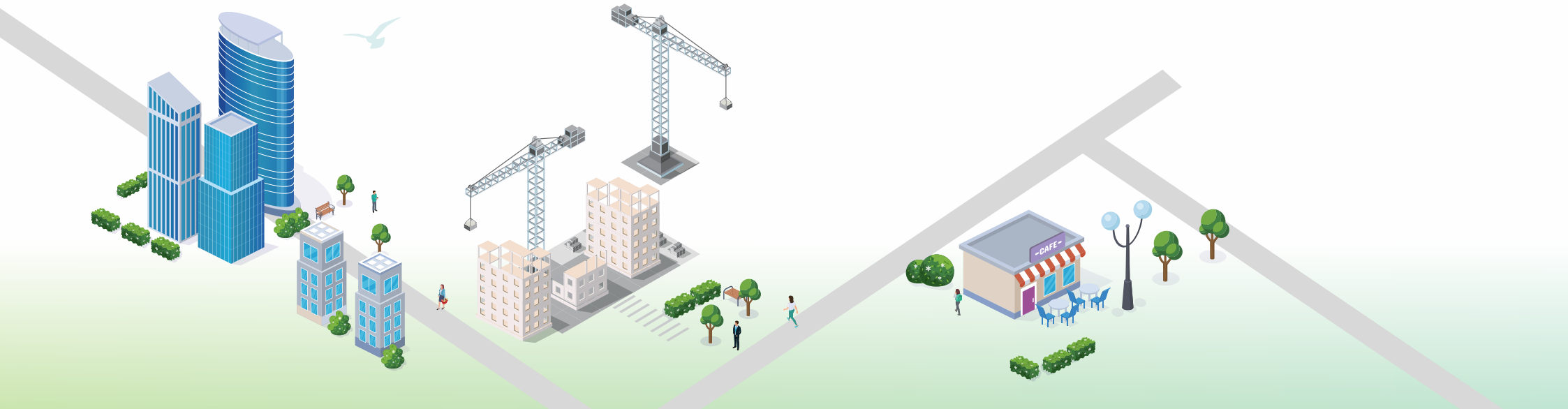
Building Happiness and

Leading the Trend

Tide, born from the ocean, and
leads the **ocean** forward

With the guidance of China Overseas' Leading Culture, we go together with "one country, two systems" policy and resonate with the "reform and opening-up" of China

Hong Kong-rooted, China-based. Global-oriented,
Keep going beyond, Lead the trend, Stand at the forefront



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About the Group

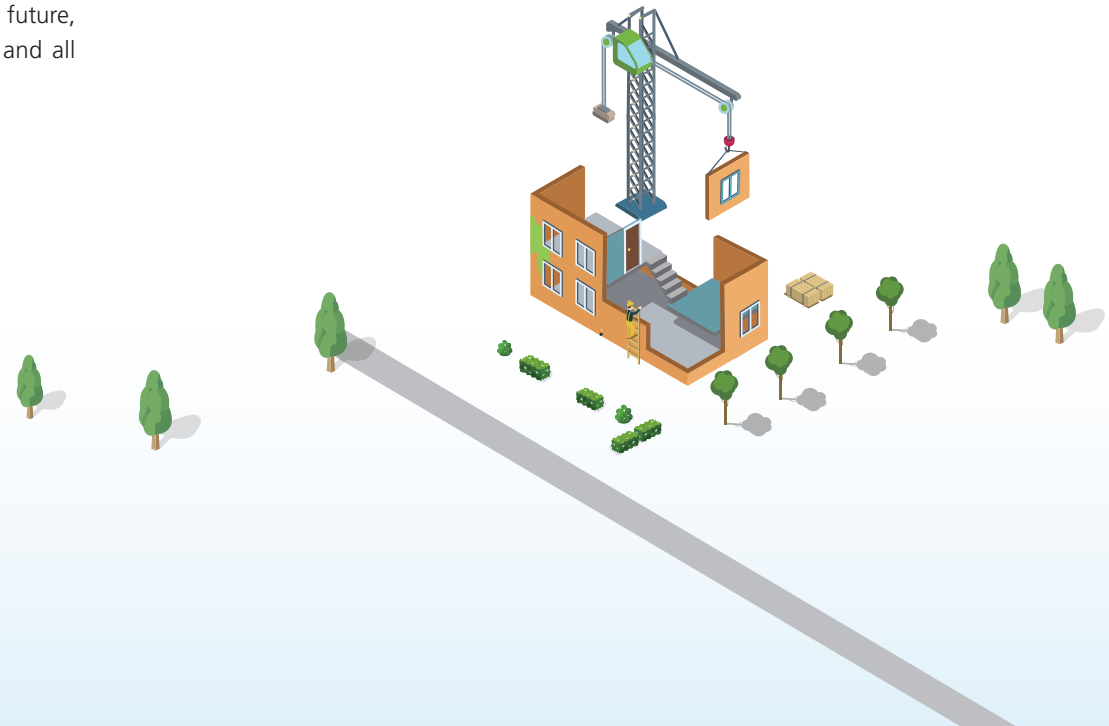
Overview

China State Construction International Holdings Limited ("CSCI") is listed on the Main Board of The Stock Exchange of Hong Kong Limited ("SEHK") (stock code: 3311) and is headquartered in Hong Kong. Together with its subsidiaries (collectively the "Group" and "We"), the Group is engaged in the construction works, infrastructure investment, operation of infrastructure assets, curtain wall systems and other construction related business. The Group's operates in Mainland China, Hong Kong, Macau and overseas. With the market differentiation strategy of "Technology + Investment + Construction + Asset Operation", the Group is committed to developing into a highly competitive, world-class construction and infrastructure investment conglomerate.

The Group is well aware of the international trends in sustainable development. In recent years, the Group has been increasing its efforts in decarbonisation, talent development, quality governance, and contribution to society, while pursuing business growth. Sustainable principles alike are integrated into the business and operations of the Group. Our fruitful achievements won the support and recognition of many parties. In the future, the Group will continue to build a society and lead the construction industry and all sectors in the value chain to leap towards a sustainable future.

Group Structure

The Group is a subsidiary of China State Construction Engineering Corporation Limited and is responsible for the construction and related business of China Overseas Holdings Limited ("COHL"). Over the years, the Group has been undertaking major projects in Hong Kong and Macau, and engaged in infrastructure investment and operation in Mainland China. The Group also owns curtain walls construction and other businesses through another listed company, China State Construction Development Holdings Limited ("CSC Development").



About the Group

中國建築國際集團有限公司
CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED

Mainland China

- Infrastructure Investment
- Operation of Infrastructure Assets
- General Contracting and Prefabricated Construction
- Other Construction Related Business

Hong Kong

- Building Construction
- Civil Engineering Works
- Foundation Engineering Works
- Mechanical and Electrical Engineering Works
- Investment driven Contracting Business
- Other Construction Related Business

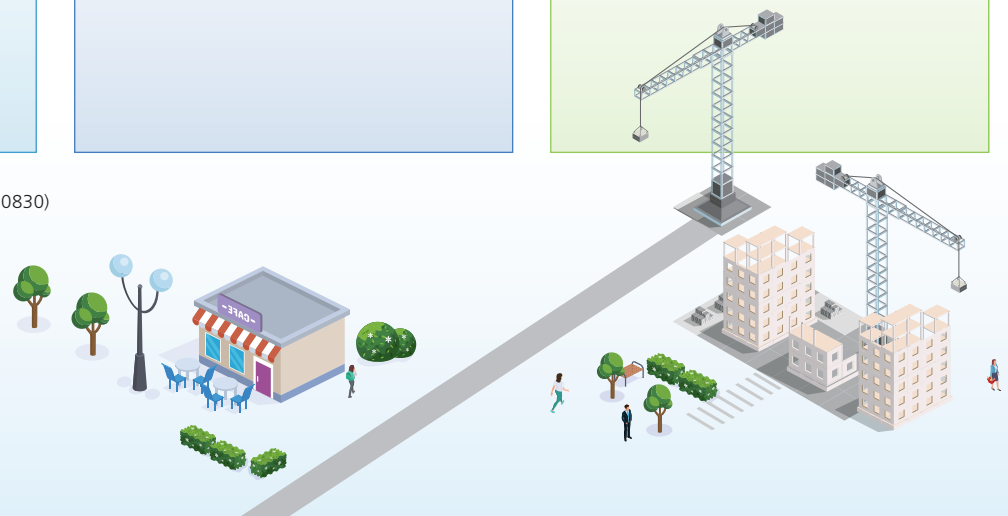
Macau

- Building Construction
- Foundation Engineering Works
- Mechanical and Electrical Engineering Works
- Investment driven Contracting Business
- Other Construction Related Business

Others

- Curtain Wall System*
- Operation Management Business*

* Operate through a listed subsidiary, China State Construction Development Holdings Limited (Stock Code: 0830)



Businesses of the Group

The following is a brief summary of the principal activities of the Group's various business segments:

Hong Kong and Macau

Being the largest main contractor of Hong Kong and Macau in terms of business scale and market share; undertakes public housing, hospitals, schools, infrastructure, private residential and hotel projects, etc.

Mainland China

Engaged in investment construction, operation management, prefabricated buildings and other businesses in Mainland China, including various infrastructures, public facilities, affordable housing, industrial parks, etc.

Other Businesses

CSC Development mainly provides a one-stop solution for curtain walls and exterior walls of building projects, including design, manufacturing, production and site installation services.

In 2021, Mainland China holds global lead in economic development and pandemic control The economies of Hong Kong and Macau also experienced a modest recovery. The Group growed steadily, seized and explored new opportunities in the construction market through continuously leveraging its advantages on branding, scale and technology.

Attributable New Contract Value

HK$140.05billion

Revenue

HK$77.31billion

YoY Growth 23.8%

Gross Profit

HK$11.98billion

YoY Growth 29.1%

About the Group

Number of Project Completion
65

Number of New Contracts Awarded
167

Under construction
376

Natural resources input
Electricity: about **186,425**MWh
Water: about **7,346,964**m^3

Human Resources
Total number of employees: **14,241**

Capital and social input
Fundraising through a variety of channels, including corporate bonds, bank loans, sustainability-linked loans, etc.; Long-term cooperation with public and private customers, suppliers, subcontractors, etc.

Direct economic value generated(HK$)
Revenue: 77.31billion

Economic value distributed(HK$):

Operating costs: **65.33** billion

Employee wages and benefits: **5.90** billion

Charitable donations: **1.427** million

Payments to government: **1.95** billion

Payments to providers of capital: **1.97** billion

Economic value retained: **2.17** billion

R&D of clean technologies: about 53.60 million[1]

For details of the Group's business strategy and financial performance, please refer to the Group's 2021 Annual Report.

[1] Related technologies include industrial automation, reuse and recycling of waste, waste treatment, desalination and information technology optimization.

Our History

1979

China Overseas Building Development Company Limited, which was the predecessor of China State Construction Engineering (Hong Kong) Limited ("CSHK"), was founded

1981

Awarded the licenses in Group C of the List of Approved Contractors for Public Works in all 5 categories, being eligible to undertake all types of public works with unlimited tender amounts

China Construction Engineering (Macau) Company Limited ("CCE Macau") was established

1987

Undertaken many projects and ranked No. 1 among Hong Kong contractors in terms of annual turnover

1991

Opening of the Wan Chai headquarters building

Milestones

About the Group

1992–1995

Rated as the best contractor for four consecutive years by the Hong Kong Housing Authority

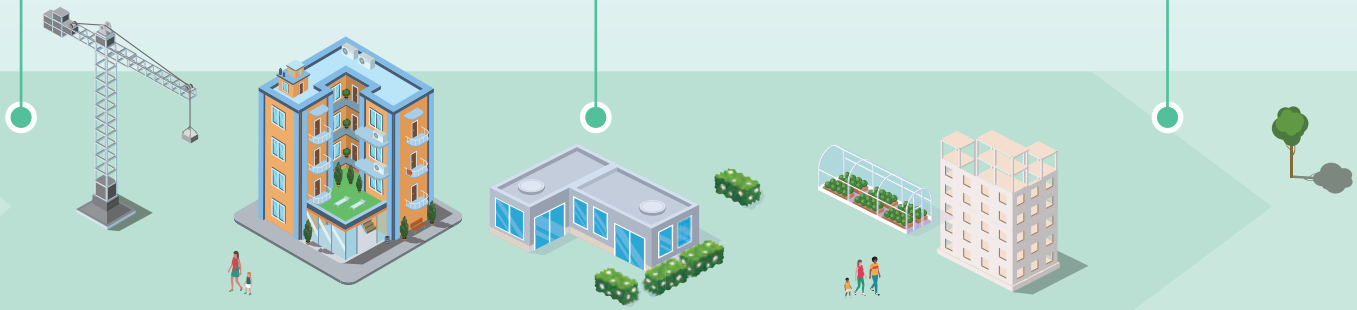
2001

CCE Macau was put under the management of COHL

中國建築工程(澳門)有限公司
CHINA CONSTRUCTION ENGINEERING (MACAU) CO., LTD.

2005

Restructuring of COHL, CSCI (stock code: 3311) was listed on the main board of SEHK



About the Group

2009

The Group seized the opportunity to expand its investment business in the Mainland China

2012

Acquisition of Far East Global Group Limited (stock code: 830), a company listed on the main board of SEHK, currently known as CSC Development, to expand its curtain wall business

2013

Launched the Mainland China prefabricated construction business

since 2017

Included as a constituent of FTSE4Good Index and holds the status for subsequent years

2020

The Group established its Institute of Construction Technology

2021

The Group announced its sustainability roadmap, became the first TCFD supporter of the construction industry in China, and piloting the first carbon neutral construction project

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

TCFD | Sustainability Roadmap | carbon-neutral construction

1995–1997

Terminal 1 Building, Hong Kong International Airport

The Group participated in the Join venture for the largest single engineering contract in Hong Kong's history. The project was awarded the second China Tien-yow Jeme Civil Engineering Prize. At the CONEXPO-CON/AGG '99, an important international construction fair in the United States in 1999, the Hong Kong International Airport was rated as one of the Top 10 Construction Achievements of the 20th Century and was the only selected project in Asia. The co-chairman of the expo said "this collection bears witness to world-class design, engineering, construction, and technologies about which prior generations could only imagine."

1998–2001

Macau Tower

Macau Tower, the tallest building in Macau, with a height of 338 meters from the ground, is located at the of new reclamation area of Praja Grande. It combines sightseeing, convention exhibition and entertainment facilities. The project has adopted a number of new construction techniques and technologies, and has won the China State Construction Engineering Corporation Award for Outstanding Technological Innovation Projects and Award for Science and Technology, etc. The tower has become a new landmark after Macau's return to China and holds many important local and international conferences and exhibitions. It has been praised as the "Best Attractions in Asia-Pacific" for the year by the prestigious tourism publication "TTG Asia".

2001–2006

Hong Kong Disneyland

The Group was a major main contractor of the HK Disneyland. It has been awarded the largest two contracts for Penny's Bay infrastructure and five projects for the theme park and hotels. As the first Chinese contractor building tourism projects with US intellectual property rights, Disney incorporated Chinese-style architecture for the first time. During the construction process, a number of engineering and construction challenges were overcome, such as toxic sludge removal, leakage prevention of artificial lake, production of high standard soil, and introduction of multinational plants.

2010–2019

Central-Wan Chai Bypass

The bypass is a new traffic route on the north shore of Hong Kong Island that runs underground through Central, Wan Chai, Causeway Bay and North Point. It links the major commercial districts of north Hong Kong Island, diverting road traffic to underground. It reduces traffic congestion on Hong Kong Island, saves time on traffic, hence improves air quality and reduces carbon dioxide emissions by about 11,000 tons per year. The project was difficult to be constructed as it runs through the bustling Hung Hom Cross Harbor Tunnel and the important landmark of Hong Kong Convention and Exhibition Center at Wan Chai. It has won the China Tien-yow Jeme Civil Engineering Prize and the British Institute of Civil Engineers NEC Tunnelling Award.

2013–2017

Hong Kong Children's Hospital

Located at the southern part of Kai Tak Development Area, the hospital is the first paediatrics hospital in Hong Kong. It has a total gross floor area of nearly 170,000 square meters and was the project with highest single contract value in the history of the Architectural Services Department of the HKSAR Government. It was a Design and Build type project, which requires management of dozens of consultants and coordination with the Hospital Authority. It is also the first hospital certified with the Hong Kong BEAM Plus Platinum grade. The hospital serves clinical service, medical research and teaching functions and focuses on treating child patients with serious, complicated or rare disease in Hong Kong. It has been designed to be children-oriented and family-friendly. The project has won the Hong Kong Quality Building Award, the highest honour for building architecture in Hong Kong, and 20+ local and international awards.

2016–construction in progress

Hefei CC Park

This is the first industrial park project independently developed and operated by China State Construction International Investments (China) Limited (CSCIICL). The total construction area is designed to be 680,000 square meters. The first and second phases of the project were completed in 2017 and 2019 respectively. The project attracts and supports the development of industries in the region and has transformed the urban area into a high-end industrial district with a mix of office, commercial and residential, shopping and other functions. The Group took advantage of this experience and applied the model to develop its industry introduction business. This model has expanded to other places in Mainland China such as Changsha, Chengdu, Foshan and so on, receiving the attention and appreciation of many local governments.

2017–2020

Anhui International Women's and Children's Medical Centre

The project is the largest modern specialized Grade-A tertiary hospital in the country. It is also the only Grade-A tertiary hospital in Anhui Province specialising for women and children, and the first such hospital with the engagement of social capital. The gross floor area is 146,000 square meters. It provides 1,500 beds and hosts two key state laboratories. The hospital serves 5 purposes, namely clinical, health care, teaching, medical research and rehabilitation. The project applied new construction technologies such as BIM, 3D roaming, etc., to simulate construction and to conduct collision tests. It is also the first project in Mainland China adopting wholly prefabricated concrete toilets. Other prefabricated components including staircases, balconies, floor slabs, internal partition panels were also used.

2018–construction in progress

Macau Light Rapid Transit Barra Station

The construction of the Light Rapid Transit (LRT) Barra Station is a large-scale public infrastructure in Macau. It is located on the main road Avenida Panorâmica do Lago Sai Van, including the Macau LRT Station 12 - the Barra Station, the connecting tunnel, the buffer tunnel and the southern ramp of the Barra Public Transport Interchange. The station consists of 4 levels and will be the first LRT station on the Macau Peninsula. It will be the first underground station in Macau and will connect the Macau Peninsula with the Taipa Line. It will also form a transportation hub with light rail, buses, car parks and public spaces integrated altogether and will significantly contribute to public transport and tourism of Macau.

2019–2021

Hong Kong Palace Museum

The museum locates in the West Kowloon Cultural District of Hong Kong. It was a major cultural project mentioned in the Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area. It aims to let Hong Kong residents and visitors experience the fascination of Chinese culture that transcends time and space. The main building is 7 storeys high and includes facilities such as exhibition halls, activity rooms and lecture halls. The architecture appears as a large square FangDing. Its design combines traditional Chinese visual and spatial aesthetics with Hong Kong's modern urban culture. The exterior walls are fitted with over 4,000 curved aluminium panels with different angles, which shine in the sunlight. The atrium ceiling is a modern interpretation of the glazed tiles on the roof of the Forbidden City. The museum will house many collections borrowed from The Palace Museum in Beijing after completion. There are high requirements for various electrical and mechanical installations, for example, the indoor temperature and humidity should be strictly controlled; the noise-cancelling design to provide a comfortable and elegant space for appreciating antiques; and the fire prevention and fighting system to extinguish fire promptly while the artifacts are protected and remain undamaged.

2019–construction in progress

Macau Cotai Healthcare Complex

It is the first public hospital built after Macau's handover to China and is also the largest open tender livelihood project in Macau's history. The project site covers an area of 40,000 square meters, with a gross floor area of 276,000 square meters. It includes composite hospital building, ancillary facilities building, integrated services administrative building, fully automatic refuse collection system, etc. The hospital will provide 846 beds and 18 operating rooms. Upon completion, the hospital will increase the number of beds by 50%, and make medical services more accessible to local residents.

2020–2021

North Lantau Hospital Hong Kong Infection Control Center

Once known as the "temporary hospital" of Hong Kong, the hospital was one of the central government's key projects in supporting Hong Kong to combat the epidemic in 2020. It is also the world's first fully MiC hospital with negative pressure isolation wards. The project comprises six two-storey wards with 816 negative pressure beds, designed and built to the standards of permanent buildings in Hong Kong. During the construction period, the Group overcame difficulties including torrential rain, typhoon and local pandemic outbreak, and completed the project in less than four months. The project increased the number of negative pressure beds in public hospitals by 75% and the virus nucleic acid testing capacity by 15% at the time of its completion.

The project was awarded the European Healthcare Design 2021 Awards – Design for Adaptation and Transformation – Highly Commended. Its modular hospital product was presented in the BEYOND International Technology Innovation Expo 2021 as one of the Group's key technologies. The documentary "Building a Dream Together Fighting the Epidemic" featuring its construction process was selected as one of the hundred videos in the past century of the national archive system by the China National Archives Administration.

Group Statistics:

One in every

15

Hong Kong residents lives in a building constructed by the Group

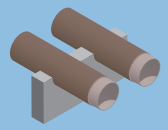
Reclaimed land area over

10 million sq.m

1/9 area of Hong Kong Island

Built

300 km



water pipes

Supplying

70 %

of fresh water in Hong Kong

Built

1/8

of the existing hospital beds in Hong Kong

The only contractor achieving full mark for

20 consecutive quarters

in Hong Kong Housing Department's PASS

One of the largest contractors in Macau, with an average of

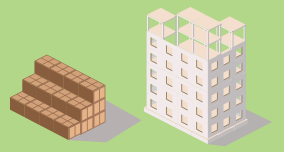
1 project per square kilometer of land

One in every

8 Macau residents

lives in a building constructed by the Group

First in market share of prefabricated building components in Hong Kong and Macau



Completed

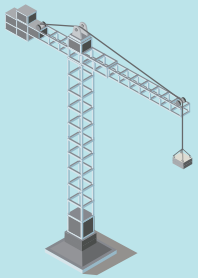
246 prefabricated building projects

total gross floor area

31 million square meters

Operates in 24 provinces and municipalities,

64 prefectural cities



accumulated investment

420 billion RMB

Guangdong, Anhui, Shandong and Chongqing

6 prefabricated production bases

Sustainability Governance

Sustainability Governance

Board Statement

2021 is a year of both challenges and opportunities. New variants of coronavirus have emerged in a row, and the epidemic has been popping up all over the world. Extreme weather events occurred frequently. The world economy is under pressure from energy and supply chain tension, soaring inflation, and looming geopolitical crisis, so the market is becoming more volatile. In this complex and ever-changing landscape, the low carbon and sustainable tide continues advancing. The United Nations Climate Change Convention reached a new consensus on a number of issues. China and Hong Kong SAR both developed a more detailed peak carbon and carbon neutrality program, and a new climate action plan as the guidance of previously announced goals.

The Group understands that these changes have far-reaching implications for the construction industry and have responded at various levels. At the top-level, the Group developed a sustainability roadmap during the reporting year, setting relevant targets and action plans in five focus areas. The Group also became the first supporter of the Taskforce on Climate-related Financial Disclosure (TCFD) in the construction industry in China. The Group starts to explore the integration of climate change with its strategic development. It has also obtained the Hong Kong Construction Industry Council's "Sustainable Finance Certification" and secured sustainability-linked loans in capitalising green financial opportunities. The Group is piloting carbon neutral construction as an annual key project and pledged that the Hong Kong Organic Resources Recovery Center Phrase 2 ("O · PARK2") will achieve carbon neutrality during its construction phrase. This is a pioneering initiative for the construction industry of China and the Group plans to promote this experience to more projects. Detailed descriptions and reviews of achievements above will be provided in this report, enabling stakeholders to gain insight into the Group's many proactive measures and its constant forefront position of the industry.

The Group understands that corporate governance is also an important part of sustainable development. The Group has planned to make important changes to the composition of the board of directors of CSCI (the "Board") and the structure of the Sustainability Committee, such as setting target for gender diversity of the Board and the addition of new independent directors, to enhance the Board's diversity and governance quality. These changes are in line with the latest regulatory requirements of SEHK and the expectations of stakeholders.

The Group continues to collect views on its sustainability through a variety of stakeholder engagement means and to prioritise the materiality of relevant issues. Stakeholder feedbacks would also help the Group in managing risks and exploring opportunities. The Group has received a number of awards and recognition in relation to sustainability and environmental, social and governance ("ESG") during the year, demonstrating our visible achievements. The Group will continue to monitor the performance of various sustainability indicators, in accordance with the plan of the roadmap, and to take concrete actions to advance the targets.

In early 2022, the coronavirus began to spread widely in Hong Kong's community. Local medical resources were tight and epidemic prevention and control were facing unprecedented challenges. The Group again undertook a number of projects aided by the central government to support Hong Kong in curbing the outbreak. Based on its rich experience of medical projects and the continuous innovation of construction technologies, the Group is building treatment and isolation facilities at an unprecedented speed to safeguard the life and health of Hong Kong residents. The Group works day and night to support the steady development of Hong Kong.

Looking ahead, the Group will continue to promote low carbon and environmental construction, enhance corporate governance, build a workforce of talent, and promote innovation and technology. These helps to improve people's livelihood and serve the community. The Group captures the trend of green and sustainable development and leads the industry and stakeholders in the value chain in leaping towards a sustainable future.

Corporate Governance

The Group is committed to improving its governance standards and fully understands that good corporate governance is closely related to "ESG" performance. The Group is led by the Board which is responsible for formulating the Group's overall strategy to oversee business development, financial performance and governance effectiveness. During the Reporting Period, the Group has adjusted the composition of the Board and reduced the proportion of executive directors in the Board. At the end of the Reporting Period, the Board was composed of eight directors, three of whom were executive directors. The current Board members have extensive experience in the construction industry in Mainland China, Hong Kong SAR and Macau SAR, as well as expertise and skills in engineering, real estate, banking, finance, accounting, investment management, enterprise and public administration, etc.

The Group understands that the diversity of the Board members is conducive to enhancing its effectiveness. A diversified Board in terms of gender, age, educational background, professional experience, knowledge, culture, tenure, etc, can break the tendency of "group think" in order to provide a more objective and balanced perspective. This assists the Group in implementing its business and sustainability strategies. The Group has also noted the heightened expectations in corporate governance and governing body among stakeholders in recent years, along with the amendments of the Code of Corporate Governance by SEHK during the Reporting Period.

In response to these new trends and regulatory requirements, CSCI has commenced to identify suitable female independent non-executive directors during the second half of the Reporting Period and has appointed Ms. Wong Wai Ching as an independent non-executive director on 25th March, 2022. With reference to the international and Hong Kong corporate governance standards, the Group plans to further enhance the Board's diversity and governance, by progressively introducing new independent directors in the coming two to three years.

In identifying candidates for directors, CSCI would consider not only the skills and experience in construction and financial related areas, but also taking into account the Group's own development and social trends in recent years. Therefore, CSCI will attach greater importance to the experience of candidates in corporate governance and technology-related aspects. In view of the Group's growing business and investment in Mainland China, CSCI will also consider candidates with backgrounds of Mainland China and will also place greater emphasis on candidates' experience in the investment field and construction technologies. In seeking and appointing directors, the Group will solicit internal recommendations and evaluation of suitable potential candidates, then consult the opinions of several parties. The decision will only be made after comprehensive and thoughtful considerations.

Sustainability Governance

The Group emphasises on the training of directors and has a series of training programs for board members, covering various aspects of professional competence and technological innovation. The legal department invites legal advisors to update the relevant laws and regulations and the Listing Rules of SEHK, if necessary. Some directors are members of professional bodies and have to meet certain requirements for continuous professional development. Directors take chances of site tours to learn about cutting-edge construction technologies. They also visit Mainland China, for example, to communicate with other organisations under the China State Construction Engineering Corporation, and to participate in the cadre training of state-owned enterprises to understand the national policies, approaches and market trends. Given the pandemic control restrictions, some training and communication sessions have been converted to video conferencing and online participation as alternatives.

In March 2021, CSCI arranged an external consultant, Carbon Care Asia Limited, to conduct a sustainability training to the Board. The contents included directors' responsibilities, global trends, national and Hong Kong SAR policies, and the current situation of the Group. Several industry-related opportunities have been identified for the Board's consideration. CSCI acted swiftly to put forward sustainability roadmap, carbon-neutral construction, climate-related financial disclosure and green finance during the year with fruitful achievements. CSCI plans to continue the training program in 2022.

The Group is aware that the effective operation of the Board is critical. The Board's effectiveness is reviewed both internally and externally. The Group has its audit and monitoring department, which conducts regular inspections and rigorous assessments in reviewing the Group's business operations and compliance, etc. This reflects the governance of the Board. Internal committees and the Risk Management Control Committee of the Group also carry out internal assessments to improve the governance practices. Through the corporate finance department, the Group maintains communications with external investors. The Group values ESG ratings from international organizations and implements governance practices that are in line with international approaches, taking into account the circumstances of other companies.

CSCI will continue to review the composition of the Board in response to the requirements of the regulatory bodies and the concerns of stakeholders, including investors. For more information on the Board and its committees, please refer to the Corporate Governance Report in the Group's 2021 Annual Report.

The Sustainability Committee has been set up under the Board. The Committee includes sub-committees and working groups, whose structure and responsibilities are shown in the following diagram.

Sustainability Governance

Sustainability Committee

The Committee is responsible for assisting the Board and making recommendations to the Board on relevant matters, including

1. Setting the Group's sustainability goals, priorities and policies
2. Managing sustainability risks
3. Reviewing and monitoring the Group's performance
4. Reviewing sustainability reports and approving the appointment of third parties

Operation Management Committee

Compliance Sub-committee

Human Resources Sub-committee

Social Investment Sub-committee

Sub-committees are responsible for formulating and implementing relevant management policies and specific measures, and reporting regularly to the Board

Sustainability Report Editorial Committee

The Report Editorial Committee is responsible for

1. Assisting the Committee and its sub-committees in discussing, drafting, and reviewing sustainability policies
2. Coordinating information collection for sustainability reports

Sustainability Working Group

The Working Group is responsible for

1. Assisting the Committee and its sub-committee in developing policies and implementing measures
2. Collecting information, consolidating data, selecting key items and validating report content to ensure accuracy and reliability
3. Organising and coordinating stakeholder engagement

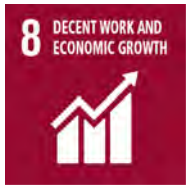
CSCI has planned to revise the composition and structure of the Sustainability Committee to strengthen leadership in sustainable development, including enhanced governance and reporting, placing more importance on coping with climate change, and helping the Group catch sustainable development opportunities.

Sustainability Strategy

Sustainable development has become an increasingly important element of enterprise management in recent years. A sustainability strategy guides an enterprise to navigate through the evolving trends of the world and integrate sustainable development with daily operations. The Group has been actively promoting sustainable development and has been proactively disclosing its fulfilment of social responsibilities. The Group has progressively upgraded to a more comprehensive sustainability-related disclosure, which leads among enterprises in Hong Kong. The Group develops a sustainability strategy that matches its business, taking into account short-term and long-term objectives, and drives relevant work systematically.

Sustainability Governance

Compliance



People-oriented approach

Safety first

Quality first

Sustainability Governance

Green development

Supply chain management

Community care

These seven approaches are the Group's guiding principles for sustainable development, through which the Group develops and publishes sustainability policies. The Sustainability Committee monitors the responsible persons of the relevant departments in implementing these policies and maintains communication with the staff to ensure that the policies are implemented. The Committee reviews the effectiveness of the policies annually and makes recommendations for revisions to the Board when necessary, taking into account the business situation and external trends.

Sustainability Policy

Sustainability Governance

During the Reporting Period, the laws and compliance requirements of government and regulatory bodies around the world continued to escalate. Investors and other stakeholders were increasingly concerned about the sustainability strategy and performance of corporations. The United Nations Climate Change Conference was held in Glasgow, forwarding to the implementation of the Paris Agreement. The European Union's Sustainable Financial Disclosure Regulation (SFDR) comes into effect in phases, with spill-over impacts to most markets around the world and needing enhanced disclosure of ESG information on products and services.

China's 14th Five Year Plan strengthens the promotion of green transformation, setting new targets to reduce energy intensity and carbon intensity. China published several documents, including the Notice by the State Council of the Action Plan for Carbon Dioxide Peaking Before 2030, China's White Paper on Responding to Climate Change: China's Policies and Actions (2021). China has also submitted China's Achievements, New Goals and New Measures for Nationally Determined Contributions and China's Mid-Century Long-Term Low Greenhouse Gas Emission Development Strategy to the United Nations. These documents delineate the specific carbon strategies to domestic and international stakeholders. In terms of social development, China has eliminated absolute poverty by 2020 and is now working towards common prosperity.

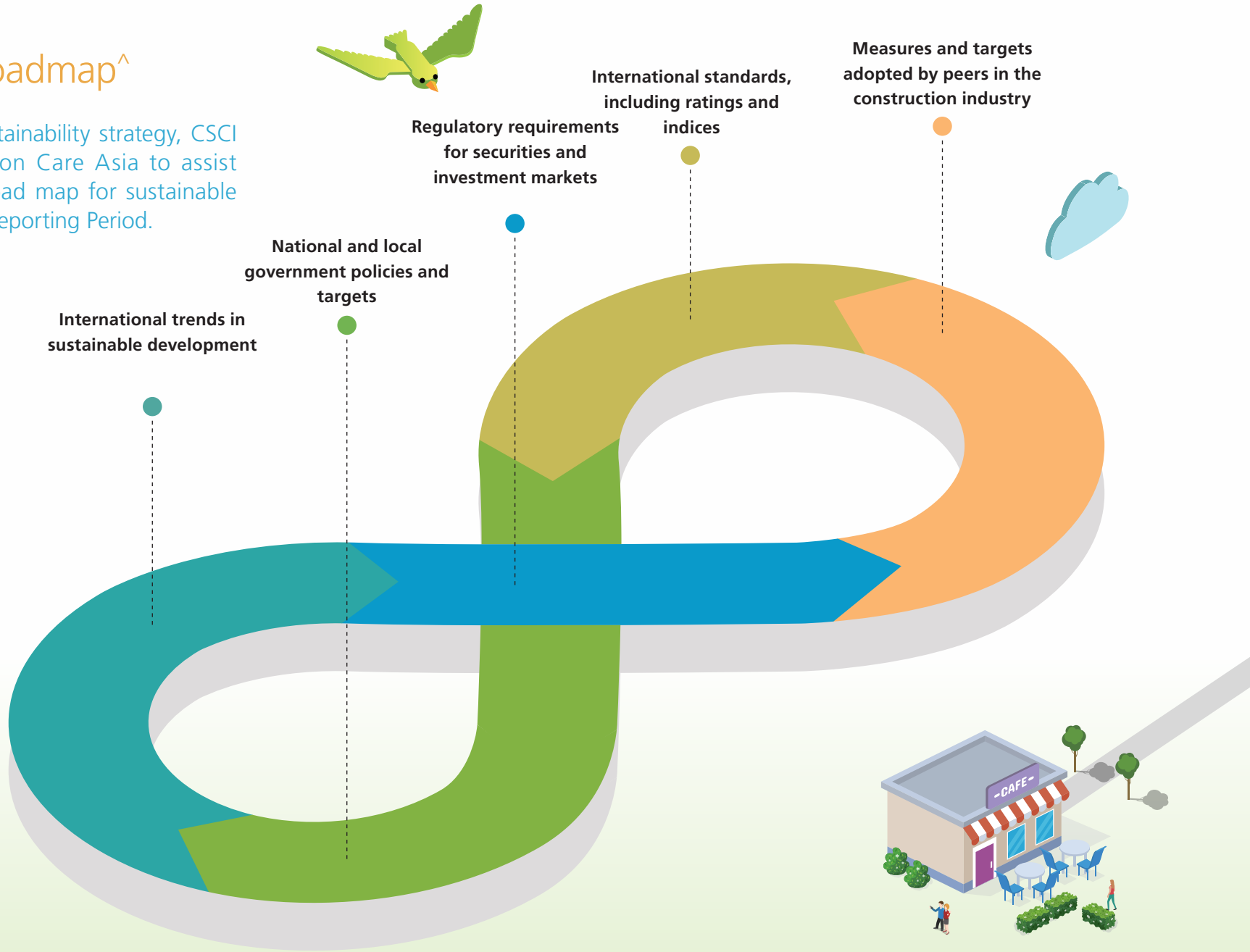
In Hong Kong SAR, the Green and Sustainable Financial Cross Agency Steering Group continued to promote TCFD-aligned climate-related disclosures across relevant sectors by 2025. The Hong Kong SAR Government has successively proposed or updated long-term environmental-related plans, such as the Climate Action Plan 2050, the Clean Air Plan 2035, Waste Blueprint 2035, and the Roadmap on Popularisation of Electric Vehicles, to follow up the objective of reducing carbon intensity by 2030 and striving to achieve carbon neutrality and 2050.

In response to the above trends, the Group has initiated some related works during the year, including the publication of a sustainability roadmap, becoming a TCFD supporter and starting climate scenario analysis, piloting a carbon-neutral construction project and unlocking green finance opportunities. CSCI has also revised its sustainability policy to enhance the content on water and forest resources and energy management, as well as environmental and social responsibilities. The Group will continue pursuing its strategy of low carbon development and technological empowerment in the future and will consider integrating them into sustainability policies.

Sustainability Roadmap^

In order to refine the sustainability strategy, CSCI has commissioned Carbon Care Asia to assist in the planning of the road map for sustainable development during the Reporting Period.

The Group has developed the roadmap in light of the following factors, combining the characteristics of the industry and its own business:



^ Includes CSC Development

Vision and Mission

Our sustainability vision is:

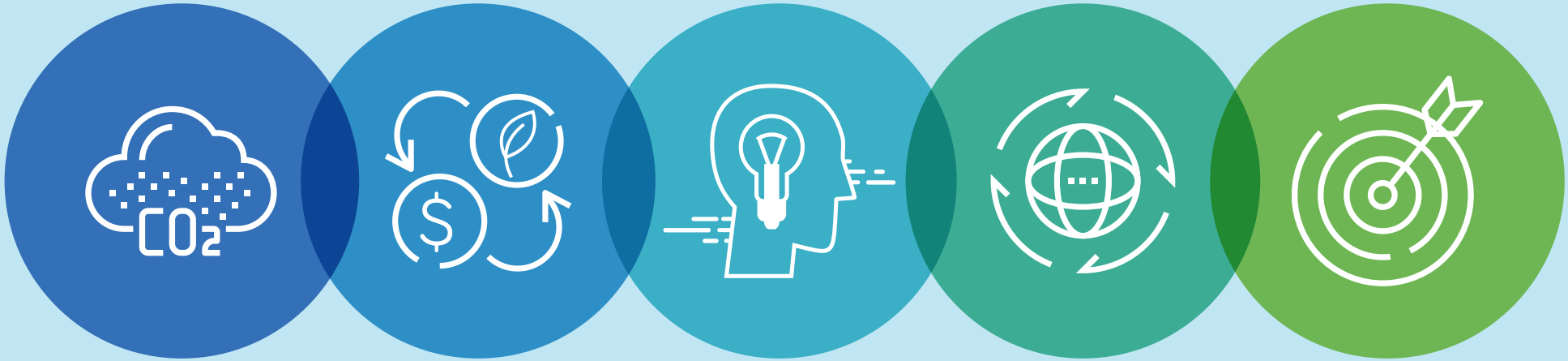
"Developing into a world-class and sustainable corporation concentrating on international construction and infrastructure investment"

Our sustainability mission is:

"Leading the trend with innovation, building a life of happiness"

Five focus areas

The five focus areas of the Group's sustainable development are:



Safeguarding the environment

Building a sustainable supply chain

Nurturing and supporting talent

Serving the community

Leading with innovation

Building on the above vision and mission, we have set out a series of targets and actions in each of the five focus areas in which our future sustainability work is required.

Safeguarding the environment

Transition to carbon neutrality

Target

Long-term carbon reduction target — **carbon neutral by 2060**		
Near-term carbon reduction target — reduce carbon intensity by **25%** in **2025** compared to 2018 (carbon emissions/ turnover)	2021 **34%**[2] less than 2018	
Provide low carbon training to all relevant **staff annually**; Provide low carbon training to all relevant **new staff**	2021 **90%**	2021 **82%**
The utilisation of low carbon and environmentally friendly generators at construction sites in Hong Kong — **100%** by 2026	2021 **50%**	

Action

Establish a Low Carbon Strategy Committee in 2022	Support clients to reduce their **carbon footprint**	Select pilot projects to include a low carbon section in the environmental vetting or review process
Select pilot projects to perform carbon assessment during the construction phase	Issue a climate strategy blueprint aligned with the Paris Agreement and adapt products and services to address climate change	
Conduct external carbon verification	Collaborate with suppliers and other business partners to promote low carbon construction	Provide low carbon training to staff

2 The Scope 1 and Scope 2 greenhouse gas intensity is 12.35 tCO2-e/ million HKD, as verified by the British Standards Institution (BSI). In recent years, the Group's use of building technologies, such as the modular integrated construction (MiC), has enabled us to increase our revenue while maintaining or even reducing our carbon emissions. In addition, the Group's subsidiary, Shenyang Huanggu Thermoelectricity Company Limited, has been gradually upgrading in recent years to improve the operational efficiency of its heat and power generation and to reduce its carbon cost in the national carbon trading market.

Green construction

Target	2021 Performance	Action
Formulate a group-level water resources management policy by 2022	The Group's sustainable development policy has been updated	Reduce diesel use on construction sites Utilise electricity from power companies in projects as early as possible
Reduce the hazardous waste intensity (generation/turnover) Increase the recycling rate of non-hazardous waste Reduce the landfill and incineration waste intensity (disposal/turnover) **The Group is committed to enhancing waste reduction continuously. We will continue to monitor and record the amount of waste generated and treated according to waste type and treatment method and set specific waste reduction targets by 2025.**	Hazardous waste: **0.22 tons/million HKD** Non-Hazardrous waste: **40.8 tons/million HKD**	Increase recycling, reuse and improve on-site practices Reduce and recycle construction waste on site, especially in civil engineering works where excavated material can be recycled as backfill or used for environmental restoration of sites Further promote the use of solar photovoltaic panels
Reduce water consumption intensity (water consumption/turnover) **The Group is committed to enhancing water management and increasing efficiency and reuse rate continuously. We will continue to monitor and record water consumption by business segment and set specific targets related to water resources by 2025.**	**95.0 m^3/million HKD**	
Reduce energy intensity (energy consumption/turnover) **The Group is committed to enhancing energy management and energy efficiency continuously. We will continue to monitor and record energy consumption by business segment and set specific energy-saving targets by 2025.**	**11.6 MWh/million HKD**	

Building a sustainable supply chain

Supply chain management

Target	Action
Establish a group-level Sustainable Procurement Guideline by 2022	Establish material wastage rate targets for subcontractors
Develop a group-wide Sustainability Initiative for Suppliers and Subcontractors by 2023	Establish a group-level policy for forest protection
Each business division organises 2 training sessions for relevant staff per year	Provide incentives for suppliers and subcontractors to meet the Group's safety and environmental requirements in order to continuously improve their social responsibility performance
Each business division organises an annual training or seminar for suppliers and subcontractors to communicate the Group's sustainability requirements	Support the Hong Kong Construction Industry Council's "Registered Specialist Trade Contractors Scheme" and prefer engaging registered contractors (RSTCs)
	Link the supply chain to UN Sustainable Development Goals (SDGs)
	Provide sustainable supply chain training to relevant staff
	Provide sustainable supply chain training to suppliers and sub-contractors

Sustainable Materials

Target	2021 Performance	Action
All timber purchased by CSHK should be with FSC certification by 2025	99.8%[3]	Establish a database of low carbon materials and products to facilitate related procurement by 2022

[3] Verified by the British Standards Institution (BSI).

Nurturing and supporting talent

Talent acquisition and retention

Target	2021 Performance	Action
Percentage of personal performance review for monthly paid employees — 100% by 2022	91%	Establish a performance-based compensation system for monthly paid staff
Performance-based compensation for monthly paid employees — 100% linked by 2022	91%	Include learning and development plans in the performance review of senior and middle management
Employee turnover rate — below 25% by 2025	20%	Improve internal job mobility
		Expand recruitment programs, including the Sons of the Sea and Sea's Recruits programs at the group level, and the programs of business divisions
		Conduct an anonymous employee satisfaction survey

Staff training

Target	2021 Performance	Action
Training percentage of monthly paid employees — 95% by 2022; 100% by 2023	89%	Provide a variety of training for staff and help them acquire future-oriented skills
Average training hours of monthly paid employees — 15 hours by 2025	19.6 hours	Enhance training related to sustainable development

Occupational safety

Target	2021 Performance	Action
Occupational injury rate — below 6.0 per 1,000 persons by 2025	3.33[4]	Establish a mechanism for subcontractor workers to report safety hazards
Annual safety and health training covers 100% of employees by 2025	81%	

[4] Verified by the British Standards Institution (BSI). Figures include employees of the Group and workers such as contractors. In recent years, the Group has made significantly efforts to improve the safety of construction by adopting smart construction sites and Modular integrated Construction (MiC).

Serving the community

Community investment

Target	2021 Performance	Action
Community projects organised/co-organised/participated — at least 80 projects per year by 2025	**83 projects**	Link community investment policy to the UN Sustainable Development Goals (SDGs)
Employee volunteer hours — increase by 15% in 2025 compared to 2020	**12,356 hours**	Build long-term partnerships with more charities
Employee volunteer attendance — increase by 15% in 2025 compared to 2020	**4,278 persons**	Arrange project staff to communicate with and understand the needs of local communities in the vicinity of project sites
Community investment amount — increase by 15% in 2025 compared to 2020 (Converting volunteer hours to money, the baseline for 2020 is recalculated as follows: The equivalent salary of volunteer hours in 2020 is about HKD 2.875 million and the amount of community investment in 2020 is about HKD 1.157 million. The sum of both is about HKD 4.032 million.)	**HKD 4.643 million**	

Employment opportunities for disadvantaged groups and young people

Target	2021 Performance	Action
Number/amount of apprenticeship — 30 places per year for young apprentices with low-income background from 2022 onwards	**27 apprentices were subsidized**[5]	Provide study grants to encourage apprentices from low-income background

[5] The Group was allocated 27 apprentices from the "Apprenticeship Training Scheme" of the Hong Kong Construction Industry Council. The Group is willing to sponsor more apprentices to join the construction industry.

Leading with Innovation

Technological innovation

Target	2021 Performance	Action
Technology investment — 2.5% of annual turnover by 2025	**Systematic data to be released next year**	Make good use of external R&D funds to drive innovative technology development
Number of research and application projects of innovative technologies — 20 projects per year from 2022 onwards	**14 items**	Collaborate with academic institutions to develop new products and services
Collaborate with academic institutions to publish papers on innovative construction technologies — 10 papers per year from 2022 onwards	**7 pieces**	Make strategic investment to support start-ups
100% of technology-related employees trained with innovative concepts or tools by 2025	**67%**	Apply BIM broadly in new contracted projects
		Adopt technologies such as MiC, BIM and DfMA to reduce on site manpower and increase work safety and efficiency
		Use and integrate technologies such as AI, IoT and big data, VR and AR more widely

Conclusion

The Group has continued to strengthen its commitment to sustainability in recent years. The Group established the sustainability vision, mission and focus areas and actively pursued a number of initiatives and projects. We have now developed and launched our Sustainability Roadmap, which includes specific targets and pragmatic actions. The Roadmap integrates the Group's future efforts to further improve its performance, gain recognitions from various parties, and lead the industry and our partners to march towards a more sustainable future.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Sustainability Risks

To safeguard the healthy growth of the business, corporations need to prevent risks and exercise internal controls to safeguard their reputation and interests. The Group has established a risk management framework with a clear level of responsibility. In accordance with the Group's strategy, the Board determines the nature and extent of risk exposure and is responsible for the risk management and internal control systems in overseeing the implementation of the system by the managements.

The Group's Audit Department is independent from the business segments and is directly accountable to the Chief Executive Officer. The Audit Department regularly reviews the Group's risk management and internal control systems to ensure their effectiveness and participates in annual Audit Committee meetings to report on their work. The department also reports to the Board on the Group's internal audit work annually on deficiencies found. Improvement plan will be proposed to rectify the problems that have been discovered.

The Group also sets up a Risk Management Control Committee to identify and assess strategic, financial, market and operational risks for each business segment. The team is chaired by the Chief Executive Officer and comprises executive directors and senior management of the investment, operation, finance and other related departments. Departments report regularly to the team to continuously identify risks and strengthen management, and to create awareness and culture of risk monitoring. Stakeholders may refer to the Corporate Governance Report in CSCI's Annual Report for more information on the Group's risk management.

The Sustainability Committee is responsible for advising the Board on the sustainability risks, reviewing risk management reports submitted by management and related risk management and control strategies annually. The Group has disclosed ESG risk assessment results in its previous sustainability report. The following is a brief summary of the Group's work on the six key ESG risks identified.

ESG Risk	Work of the Group
Infectious diseases	• Maintain strict infection control measures at work sites and offices, including nucleic acid and rapid testing, cleaning and disinfection, to prevent the spread of the virus; • Build a number of epidemic control projects for Hong Kong and Shenzhen, to enhance the overall capacity of the society in combating and mitigating the impact of the pandemic
Climate change	• Adopt the risk analysis and disclosure framework of TCFD to assess the physical and transition risks and financial implications of Hong Kong projects; • Explore the business direction of low-carbon transformation through piloting carbon neutral project
Occupational health safety and labor force	• Use technology to help reduce occupational safety risks and labour demand; • Include specific objectives and actions such as safety performance, safety training and staff turnover to the sustainability roadmap
Supply chain management	• Procurement of low carbon environmental raw materials for pilot projects, driving supply chain green transformation; • Use the Group's influence to drive continuous improvement in the performance of social responsibility of suppliers and subcontractors
Technology innovation	• Achieve partial disruptive innovation in certain areas of technology, including MiC technology, intelligent construction sites, medical facilities and glass curtain walls, leading the revolution in construction sector
Network security	• Continue to monitor information systems, safeguard information security, strengthen digital development and information infrastructure, and train and alert employees on information security

Sustainability Commitments and Achievements

Investors and other stakeholders are concerned about the sustainable development of enterprises. Several international rating agencies and index companies have established ratings or index products for enterprises' ESG performance. From time to time, the rating agencies and index companies update their scoring criteria to differentiate ESG performance of companies and filter those to be included in their indices. In recent years, the Group has strengthened the disclosure of information on sustainable development and was selected as a constituent of FTSE4Good for the fifth consecutive year by FTSE Russell. In addition, the Group was ranked 1st in "Best ESG" at Industrials Small & Mid Caps sector in the annual evaluation of more than 4,000 certified financial industry investors and analysts organized by the international leading financial journal, Institutional Investor. As one of the world's most influential financial magazines, Institutional Investor reflects the most representative view of capital markets. These two examples show that the Group's ESG level is recognized by the global capital market.

The Group continues to receive the highest level of "Carbon Care ESG Label" this year, recognizing our ESG disclosure performance. In addition, CSHK, one of the Group's subsidiaries, has been the only non-listed company awarded with this label for the second year. The award level is also upgraded, demonstrating our continued improvement in ESG disclosure. Meanwhile, the Organic Resource Recovery Centre Phase 2 ("O·PARK2") project of CSHK has been awarded the only "Carbon Care Construction (Process) Label" and received the highest Gold (Carbon Neutral) rating. Our efforts and results in this pilot carbon neutral construction project have been recognized and respected.

The Group also received the CDP award for Outstanding Performance in Promoting Zero-Deforestation Transformation, which recognizes our environmental information disclosure efforts in 2020 and demonstrates the excellent forest management practice in the industry. This is the second consecutive year that the Group has won CDP awards, encouraging our efforts in sustainable development management. CDP is an international non-profit-making organization that focuses on environmental ratings. It sets up ratings for climate change, water resources and forests, invites enterprises to report and makes the results public for reference of other organisations.

During the year, the Institute of ESG & Benchmark (IESGB) in Hong Kong organised the first ESG Achievement Award 2020, with Hang Seng Indexes as its honorary supporting organisation and the Hong Kong Quality Assurance Agency as ESG data provider and supporting organisation. The Group was awarded the Category A "ESG Benchmark Award - ESG Leader Gold Award" in recognition of its achievements in implementing ESG in the previous year. In the first evaluation, nine listed companies received such awards, including a number of blue-chip companies.

Sustainability Governance

The Group's 2020 Sustainability Report has recently won two awards in the Mercury Awards 2021/2022, "Annual Reports- Online Grand Award" and "Annual Report - Online Sustainability Report Gold Award. The Grand Awards were selected from the top scoring gold winners in each category. The WeChat (concise) version of the report also won the "Social Media - WeChat/Weibo Honors Award", indicating that the Group's sustainability communications has been recognized internationally. Organized by MerComm, Inc. and in its 35th year, the Mercury Excellence Awards is one of the world's largest annual public relations awards, honouring organizations with outstanding corporate communications.

The Group's achievements in sustainable development are evident by having received numerous awards and recognitions. In addition, the Group's performance in quality, safety, environmental protection and technology has also been recognized by the industry and property owners. Details of individual awards will be further described in the relevant sections. One may also refer to the section "Major Awards and Accolades 2021" of CSCI's Annual Report. In the future, the Group will continue to take advantage of the new opportunities in international trends, strive to promote and implement sustainable development, use technology to assist in managing environmental and social issues, improving performance and creating competitive advantages, so as to bring transformation to the industry.

Sustainability issues and policies

Sustainability encompasses a wide range of issues for different industries and companies, each having its own set of foci and priorities depending on their specific business nature and operating conditions. Both the GRI Standards and ESG Guide consider materiality as an important principle for sustainability reporting disclosure. The Group conducts stakeholder engagement activities to identify and prioritize its major sustainability issues. The results of the materiality assessment are validated by the Board and serve as the basis for the preparation of the sustainability report. The Group also collected views through stakeholder engagement and reports them to management for consideration of targeted measures to respond to stakeholders' concerns.

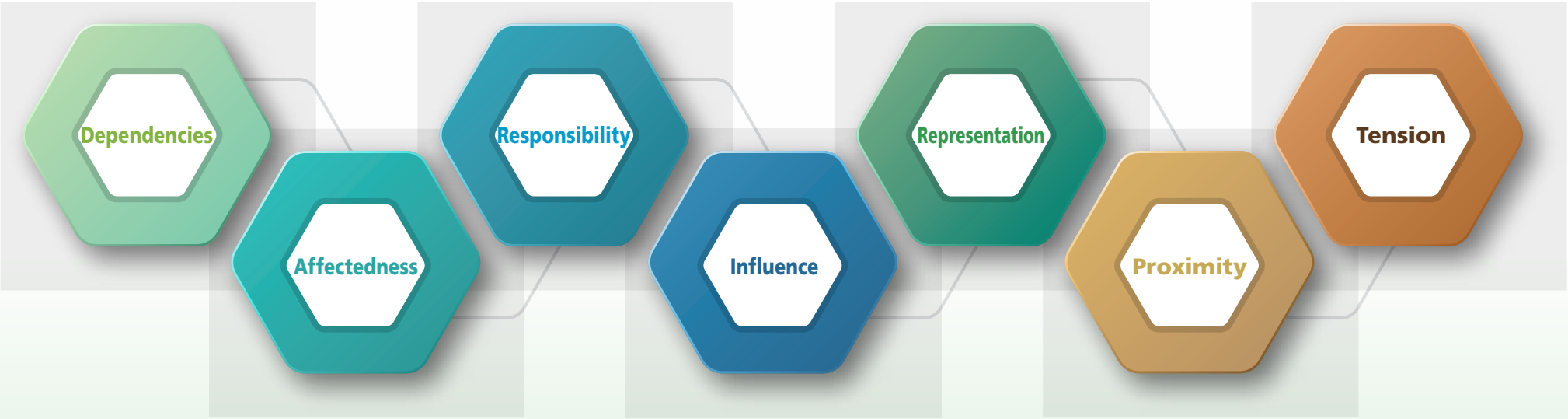
Sustainability issues and policies

Stakeholder Engagement

Stakeholders are groups or individuals that have a significant impact on the business. Business operations and development are closely related to stakeholders. Companies not only depend on the contributions of their stakeholders, but at the same time, companies' business affects stakeholders and their decisions. The Group fully understands the importance of stakeholder engagement in terms of the Group's sustainability. The Group has been maintaining close communication with stakeholders, listening to their views and expectations, while promoting mutual understanding. We would like to let stakeholders to know the Group's strengths and challenges and suggest areas in which the Group could improve. This would help the Group to keep abreast of the latest international and industrial trends, and improve its sustainability performance.

The Group's diverse business spans different regions and involves a large number of stakeholders. The Group refers to international standards to identify key stakeholders and to establish a wide range of stakeholders' communication channels to proactively collect feedback for our day-to-day operations. For example, the Group references to AA1000SES, an international standard for stakeholder engagement, and considered the following seven factors the standard has recommended, including:

For more information on the AA1000SES and the Group's stakeholder engagement guidelines, please refer to the Group's Sustainability Report 2019 and 2020.



Sustainability issues and policies

Based on the above criteria, the Group has identified its key stakeholders and classified them into six categories, namely employees, investors, customers, suppliers or subcontractors, government and regulatory authorities, and community groups. The following table summarizes the different communication channels, the concerns of stakeholders and the chapters of this report relevant to them.

Key stakeholders	Issues of concern	Communication channels and frequencies	Relevant chapters of the report
Employees	• Employment management system • A safe and healthy working environment • Labor relations • Training and development • Diversity, equal opportunities and anti-discrimination	• Emails and announcements (routine) • Internal meetings (routine) • Training courses (regular) • Corporate newsletters (quarterly) • Grievance mechanism (as needed)	Employment system and welfare, work safety and health, staff training
Investors	• Anti-Corruption • Promote suppliers to go green • Land degradation, pollution and restoration • Innovative technologies and applications • Carbon neutral construction	• General meetings (annual and as needed) • Annual report, interim report, quarterly financial information and operation announcement (quarterly) and other announcements (occasional) • Roadshow and reverse roadshow (occasional) • Investor meetings (occasional, refer to annual report) • Indices and ratings (annual)	Fighting corruption and promoting integrity, engineering and supply chain, Environmentally Friendly construction, carbon neutral construction and O·PARK2, innovative technologies and applications
Customer	• Carbon Neutrality construction • Energy • Procurement behavior • Promote suppliers to go green • Participation in public policy	• Tender meetings (as needed) • Project briefings (regular) • Tea gatherings and industry activities (occasional)	Carbon neutral construction and O·PARK2, Environmentally Friendly construction, engineering quality and supply chain, community involvement and public welfare

Sustainability issues and policies

Key stakeholders	Issues of concern	Communication channels and frequencies	Relevant chapters of the report
Business Partners	• Safe and healthy working environment • Prevention of anti-competitive behavior • Respect for human rights and indigenous rights • Anti-Corruption • Customer privacy	• Procurement procedures (daily) • Review and Assessment (Annual) • Performance Monitoring (daily) • Supplier/subcontractor Meeting (periodic)	Carbon neutral construction and O·PARK2, environmentally friendly construction, engineering quality and supply chain, community involvement and public welfare
Government and regulatory bodies	• Land degradation, pollution and restoration • Prevention of child labor and forced labor • Customer privacy • Responsible marketing • Innovative Technologies and Applications	• Public consultation (as needed) • Working meetings (routine) • Feedback through industry associations (occasional)	environmentally friendly construction, employment system and welfare, customer privacy, business responsibility, innovative technologies and applications
Community groups (e.g. professional bodies, media and non-governmental organizations)	• Promote suppliers to go green • Waste • Materials • Land degradation, pollution and restoration • Construction site labor	• Seminars and workshops (occasional) • Press conferences and news releases (occasional) • Community opinion surveys (as needed) • Charity event planning and participation (occasional)	Engineering quality and supply chain, environmentally friendly construction, employment system and welfare, innovative technologies and applications

To prepare this report, the Group also commissioned an independent consultant to conduct stakeholder engagement activities besides the daily communication channels, including questionnaires, focus group discussions, external stakeholder interviews, etc. Through such participation, the Group has received feedback from these stakeholders to establish the material issues of this report, while being able to link the content of the report back to the concerns of the stakeholders. This provides a reference to revise and update relevant sustainability strategies and measures.

The Group had previously conducted external stakeholder engagement in Hong Kong, inviting stakeholders such as subcontractors, to participate in discussions to understand their concerns and to help the Group understand their sustainability challenges and risks. In preparation for this report, the Group specifically invited three external stakeholders from Macau and to understand their views of the Group's sustainability efforts. The interview is summarized below:

Subcontractor:
Angela Ngai, Director, Companhia de Construçào E Fomento Predial Hai Fai Limitada

Hai Fai undertook numerous front line sub-contracting works in Macau. Under the guidance of the Group, Hai Fai gradually changed the traditional concept of construction by introduction of various construction machinery equipment, including iron binding, mud water, pipeline detection etc., to assist their workers during the construction process. From the initial resistance, to acceptance, then recognition, Hai Fai felt the benefits of investing in new technologies, which includes the improvement of work efficiency, reduction of waste, and better safety during construction. In the future, Hai Fai wants to learn more about the use of artificial intelligence and embed it into our construction process. This will allow Hai Fai to be ready for new construction process and technological innovations.

Supplier:
Xu Xin, Deputy General Manager, Macau Cement Manufacturing Company Limited and Managing Director, Macau Concrete Company Limited

Both companies are the largest suppliers of basic building materials in Macau, and regarded as one of the main source of environmental impact in Macau as identified by the Macau Government.

The company actively cooperates with the Macau government to monitor dust and recycle water levels to illustrate the company's environmental management results, and to fully comply with every relevant standards. In terms of technology and R&D, the company has transformed its production line control system, such as upgrading its automation system, and using cement substitutes like pulverized fuel ash and ground granulated blast slag in concrete. The company has been closely monitoring the international development in green tech, and is willing to work with the Group to promote the use of cleaner, environmental friendly and low-carbon products and technologies to the Macau government and market.

Lender:
Lin BaoGuo, Deputy General Manager, Corporate Banking Department, China Guangfa Bank Company Limited Macau Branch

Guangfa Bank is deeply involved in the construction industry in Macau and has a wide range of business relationships with the Group, including assisting the Group to pilot the "Financial Intelligence Analysis System". Guangfa Bank pays close attention to the safety and other risks associated with construction. The Guangfa Bank has sent their staff to inspect construction sites and participated in VR safety training systems in person. This deepened the Guangfa Bank's understanding of the leading edges of the Group in using innovative technologies, and sound management, enhancing the bank's confidence to the Group. Furthermore, Guangfa Bank also recognises the Group's effort in social responsibility. Guangfa Bank hopes to explore other opportunities in the area of green finance and social responsibility with the Group in the future.

Materiality Assessment

The Group has adopted the following four steps to identify the substantive issues of this report:

1 Updating the list of sustainability issues

- With reference to international sustainability standards and guidelines, local practices, industry trends, and the results from previous stakeholder engagement and materiality assessment results, the consultant identified 35 sustainability issues in 5 main categories, namely "Economy", "Environment', "Employment and Labour Practices", "Operating Practices" and"Community Investment" , that are most relevant to the Group's business and its impact.

2 Collecting stakeholders' opinions

- The Group gathered a total of 667 valid responses from internal and external stakeholders who were invited to participate in an online survey to assess the 35 sustainability issues identified.
- Furthermore, 4 internal stakeholder workshops were held and 8 in-depth interviews were arranged between the consultant and the CFO and senior management. The consultant discussed the Group's the current status of sustainability, future roadmap and expectation.

3 The topics are arranged in substantive order

- Based on the responses collected, the consultants have weighted the views of various stakeholders, analyzed the concerns of stakeholders in a comprehensive manner, and classified the issues as "very important issues", "important issues" and "other issues". There are 17 "very important issues" and "important issues".

4 Identification of substantive topics

- The consultants submit analytical reports to the Commission on Sustainable Development and to the Board, including a substantive listing of issues and a summary of the recommendations of stakeholders. The Group identified 17 issues as substantive topics of this report. This is the key point of disclosure.

Sustainability issues and policies

In a stakeholder questionnaire, the Group asked stakeholders to assess each sustainability issue by:

1. **The importance to the stakeholder**

2. **The extent of the Group's impact on the economy, the environment and society**

The Group also asked each stakeholder to select a few topics that they believe the Group can contribute more in terms of sustainability.

The 17 material topics are listed in the following table, and also displayed as a materiality matrix. The two dimensions of the matrix are used to indicate the importance of the issue to stakeholders and the degree of the Group's impact on the economy, environment and society; the size of the points in the matrix represents the size of numbers of the stakeholders who believe that the Group can contribute positively to the issue.

		Material issues	Issues on which the Group can make a positive contribution	New substantive topics (Compared to 2020)
Very important issues	8	Carbon neutrality construction	✓	✓
	10	Waste		
	11	Water and effluents		
	12	Energy		✓
	17	A safe and healthy working environment	✓	
	32	Respect for human rights and indigenous rights		✓
	13	Materials		
	9	Greenhouse gas emissions		
	5	Anti-Corruption		

Sustainability issues and policies

		Material issues	Issues on which the Group can make a positive contribution	New substantive topics (Compared to 2020)
Important issues	25	Innovation and applications	✓	
	14	Promote suppliers to go green		✓
	15	Land degradation, pollution and restoration		✓
	7	Respond to climate change		✓
	29	Customer privacy		
	23	Prevention of child labor and forced labor		
	1	Economic performance	✓	✓
	6	Prevention of anti-competitive behavior		
	30	Intellectual property rights		


2021 Materiality Matrix
Important issues
Very important issues
Importance to stakeholders
CSCI's impact on economy, environment and society
10
8
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35

Sustainability issues and policies

Unsurprisingly "carbon neutrality construction" is the most important issues of this year's Report. Compared with last year, Anti-corruption and A Safe and Healthy Working Environment also remained as Very Important Issues, as well as Environmental topics such as Waste, Water and Effluents, Materials and Greenhouse Gas Emissions. Other topics from last year that are included in this year's Report are: Customer Privacy, Intellectual property, Child Labor and forced Labor Prevention and Anti-competitive Practices.

Among the new material issues in this report, there are issues that were included in the past three years (including "economic performance", "land degradation, pollution and rehabilitation" and "respect for human rights"), while some have not been incorporated in recent years ("energy", "energy" and "human rights"). " promote suppliers to go green ") or newly established issues ("responding to Climate Change"). The following is a description of the Group's management policies and measures on these issues in accordance with the "Low Carbon Environment", "Social responsibility" and "Integrity Management" sections. The table below lists the scope of impact of the 17 substantive issues, the GRI standards associated with them, and the corresponding sections in the report.

Material issues		GRI standards	Scope of impact		Related sections
			Within the Group	Outside the Group	
8	Carbon neutrality construction	Not applicable	✓	✓	Low carbon environmental protection
10	Waste	GRI306	✓	✓	Low carbon environmental protection
11	Water and effluents	GRI303	✓	✓	Low carbon environmental protection
12	Energy	GRI302	✓	✓	Low carbon environmental protection
17	A safe and healthy working environment	GRI403	✓	✓	Social responsibility
32	Respect for human rights and indigenous rights	GRI411	✓	✓	Social responsibility

Sustainability issues and policies

Material issues		GRI standards	Scope of impact		Related sections
			Within the Group	Outside the Group	
13	Materials	GRI301	✓	✓	Low carbon environmental protection
9	Greenhouse gas emissions	The GRI305	✓	✓	Low carbon environmental protection
5	Anti-Corruption	GRI205	✓	✓	Business responsibility
25	Innovation and applications	Not applicable	✓	✓	Social responsibility
14	Promote suppliers to go green	Not applicable	✓	✓	Low carbon environmental protection
15	Land degradation, pollution and restoration	Not applicable	✓	✓	Low carbon environmental protection
7	Respond to climate change	Not applicable	✓	✓	Low carbon environmental protection
29	Customer privacy	GRI418	✓	✓	Social responsibility
23	Prevention of child labor and forced labor	GRI408, GRI409	✓	✓	Social responsibility
1	Economic performance	GRI201	✓	✓	Business of the Group
6	Prevention of anti-competitive behavior	GRI206	✓	✓	Business responsibility
30	Intellectual property rights	Not applicable	✓	✓	Social responsibility

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

As the impacts of climate change and the effects of extreme weather become more pronounced, carbon neutrality has been placed on the development agenda globally, as well as in China. Buildings account for more than half of China's carbon emissions over their life cycle and play a pivotal role in achieving the carbon neutrality target. The Hong Kong Climate Action Blueprint 2050 proposes four major strategies. "Energy Saving Green Buildings" is one of them. Carbon emissions during building operations can be reduced through the design of green buildings to improve energy efficiency and the use of renewable energy to generate electricity. During the construction phase, the major carbon emissions are from the implicit carbon emissions from the construction materials, such as the mining and production of concrete, steel, glass and etc. Moreover, the use of fuel and electricity at the construction sites will also generate a certain amount of carbon emissions.

The Group is actively facing the challenges of low carbon transition, actively exploring the carbon neutral and development path, seizing the opportunities of industrial upgrading, responding to the expectations of the general public, and working together to cope with the climate change. As a construction contractor, we are committed to reducing carbon emissions from the construction process, taking responsibility for emission reduction, accumulating low-carbon construction technologies and experiences to build competitive advantages, and promoting the adoption of lower carbon-friendly building design and construction materials in the industry chain to lead the industry toward a lower carbon future.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

In this context, the Group has decided to use the Hong Kong market as a starting point to establish a governance framework for carbon neutral and carbon asset development in CSHK, including both decision-making and execution levels. In this way, the senior management, together with subsidiaries and functional departments, can work together to coordinate and take charge of the low carbon construction.

Decision-making Level
Responsible for the promotion and management of CSHK's low carbon construction and carbon assets development

Carbon Neutral and Carbon Assets Development Committee

Executive Level
Assist the committee in the development of carbon neutral construction projects and carbon asset projects, and prepare related materials and implementation plans

Carbon Neutral and Carbon Assets Development Working Group

The Group has taken into account the life cycle carbon emissions of the building in all aspects, including design, materials, engineering construction, and operational maintenance. The CSHK has also decided to take the Organic Resources Recovery Centre Phase 2 (O·PARK2) project as the first pilot example to implement carbon neutrality during construction phase. The Group is committed to making O·PARK2 the first project in China to achieve carbon neutrality during construction period, setting an exemplary benchmark for the sustainable development in the construction industry.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Project Background

Food waste accounts for about 30% of the municipal solid waste disposed of in Hong Kong, the highest proportion of waste categories. Disposing of organic waste at landfills takes up a shortage of landfill space and creates leachate and landfill gas during the biodegradation process, creating a long-term burden on the environment. Recycling food waste can reduce the amount of waste disposed of in landfills, extend the life of landfills, and reduce greenhouse gas emissions. Separating food waste at source, recycling it into useful resources, turning waste into energy, making good use of resources, and making society more sustainable.

The O·PARK2, located in Sha Ling, North District, is a commercial and industrial organic waste recycling facility developed by the Hong Kong Environmental Protection Department as part of the plan to establish a food waste recycling network in Hong Kong, as part of the HKSAR Government's waste management policy. A joint venture between CSHK and its partners has been awarded the design, construction and operation contract for O·PARK2, including a 15-year operation period. O·PARK2 will use anaerobic digestion technology to convert food waste into biogas for power generation and will process the treated residue into fertilizer.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Carbon Neutral Construction Planning

In order to implement the carbon neutral project, O·PARK2 has established a Carbon Neutral Working Group, headed by the Project Director and Site Manager to lead all relevant departments, including the Design, Quantity Surveying, Engineering, Quality, Materials and Environment Departments. The Working Group takes responsibility on the carbon neutrality plans and practices of the project. In accordance with ISO 14064–1 Greenhouse Gas and PAS 2060 Carbon Neutrality standards, the Working Group conducts carbon emission data accounting in a scientific and professional methodology.

The working group adopted the operational control method to determine the organizational boundary and accounted for the carbon emissions of the O·PARK2 project under the responsibility of CSHK in the first two years of construction, and identified and quantified the direct and indirect emissions that CSHK will control at the operational level. For the identified major sources of carbon emissions, we formulated corresponding emission reduction plans for direct and indirect energy use and other indirect greenhouse gas emissions, and took measures to reduce them. According to the preliminary estimation of the working group, building materials account for over 80% of the carbon emissions during construction, which is greater than direct emissions and indirect energy emissions, so measures targeting the downstream of the value chain are essential to reduce emissions during construction. The Group actively collaborates with various stakeholders in the construction value chain in formulating the construction phase emission reduction plan to meet the functional and architectural design requirements of the project, while working with suppliers to source suitable low-carbon building materials.

On November 9, 2021, CSHK, a subsidiary of the Group, issued the Carbon Neutral Commitment for the Construction Period of Organic Resource Recovery Centre Phase II, committing to achieve carbon neutrality during the construction period of O·PARK2 through three major strategies: sustainable management, technological innovation and support for voluntary emission reduction, and to disclose relevant data and results on a regular basis every year.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Sustainable Management

Project Design and Construction Incorporates the Concept of Sustainable Development

Optimizing land uses to alleviate the problem of food waste in Hong Kong:

- Through sophisticated BIM design and the introduction of advanced foreign food waste treatment technology, O·PARK2 can handle 300 tons of organic waste per day on a mere 2.5 hectares of land.

The project has been designed according to Hong Kong BEAM Plus Platinum rating standard with the enhancement of virescence ratio:

- Maintaining 40% of the original plant on site and replanting trees throughout the slope area;
- To increase the green area to 50%, we will build gardens and urban farms on the roof of buildings to integrate the buildings into the surroundings and reduce the impact on landscape.

Intelligent Site Management

The C-Smart Intelligent Site Management Platform, developed by the Group's wholly owned subsidiary, enables digital, refined, and intelligent management to reduce carbon emissions generated from day-to-day site management. For more information on the C-Smart systems, please refer to the section of Technology Innovation.

C-SMART

Green Purchasing

In accordance with the CSHK Procurement Policy and the Supplier Code of Conduct, priority should be given to the procurement of nearby and environmentally friendly materials, and orders should be made according to demand. Procurement should be strictly based on the number of site applications and project needs to reduce the waste of resources and the additional carbon emissions.

On the basis of this policy, the project has further sought and adopted low carbon materials available on the market, such as concrete and steel reinforcement containing recycled materials. The project uses up to 100% recycled steel and metal iron, as well as the concrete with ground granulated blast-furnace slag (GGBS) as a replacement for 60% of cement, reducing the carbon emissions of construction materials.

In addition, the project also applies CO2 mineral carbonation curing concrete building blocks based on CCUS technology. CCUS (Carbon Capture, Utilization, and Storage) technology is one of the key cutting-edge technologies to deal with global climate change.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Site Environmental Management Measures

Construction sites electrification

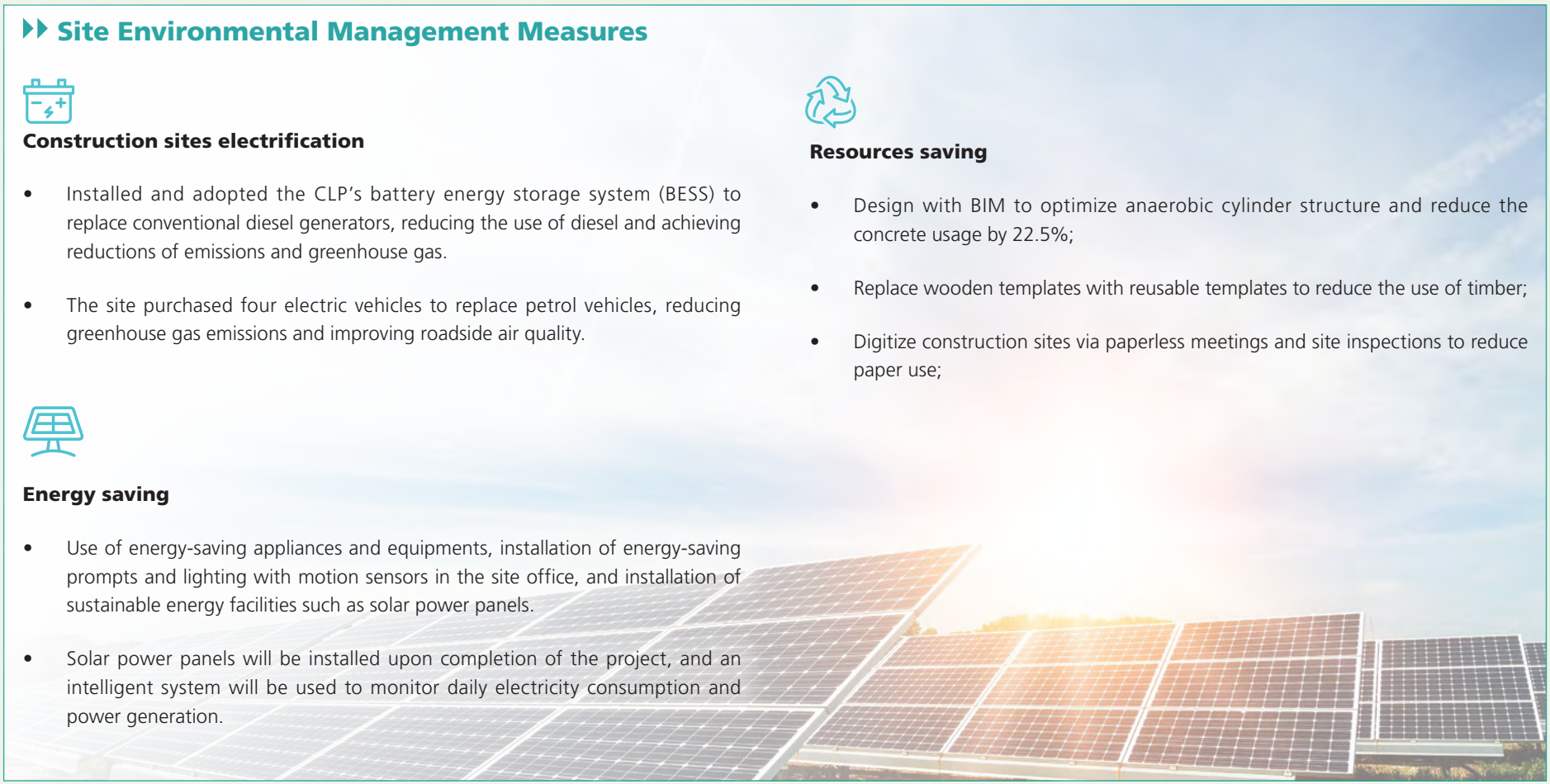
- Installed and adopted the CLP's battery energy storage system (BESS) to replace conventional diesel generators, reducing the use of diesel and achieving reductions of emissions and greenhouse gas.
- The site purchased four electric vehicles to replace petrol vehicles, reducing greenhouse gas emissions and improving roadside air quality.

Energy saving

- Use of energy-saving appliances and equipments, installation of energy-saving prompts and lighting with motion sensors in the site office, and installation of sustainable energy facilities such as solar power panels.
- Solar power panels will be installed upon completion of the project, and an intelligent system will be used to monitor daily electricity consumption and power generation.

Resources saving

- Design with BIM to optimize anaerobic cylinder structure and reduce the concrete usage by 22.5%;
- Replace wooden templates with reusable templates to reduce the use of timber;
- Digitize construction sites via paperless meetings and site inspections to reduce paper use;



Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Site Environmental Management Measures

Water conservation

- Use a well-established sewage treatment system to treat construction sewage and reuse a portion of the water used for washing vehicles, saving approximately 36,500 liters of water per year. The installation of flush-free urinals in the Falcon Waterfree Urinals on-site toilets can save up to 151,000 liters of water annually;
- Upon the project's completion, the sewage treatment system will provide 294,500 liters of reclaimed water per day for daily cleaning as well as process water. Collect rainwater and recycle the treated wastewater for plant irrigation, which can save 82.4% of irrigation water.

Waste management

- Over 94% of the waste generated on-site has been generated and recycled to date, with 9,100 tonnes being recycled till August 2021. These include:

  Transport of 37 tons of non-inert construction waste to the Green Park for recycling;

  Bring 375 tons of metal, plastic, paper, glass, etc., to the EPD's community recycling network "Green in Fanling" for recycling;

  Transport of 8,750 tons of inert construction waste to public fill depots or temporary construction waste screening and sorting facilities as fill for reclamation and filling works;
- Purchase of solar waste compressors at construction sites to reduce refuse and improve environmental hygiene.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Enhanced Carbon-Related Disclosure

The Group has been publishing and disclosing the performance of sustainable development through sustainable development reports and websites. To further enhance information disclosure, the Group has undertaken the following actions:

- Build an on-premises sustainable data cloud platform that addresses information and data collection and storage challenges, and consolidate ESG data across sites and offices to improve data accuracy;
- Self-developed carbon neutrality cloud platform to collect and demonstrate the carbon emission levels of the O·PARK2 pilot projects and to enable the electronic carbon verification process;
- Monthly updates on the platform on GHG emissions, distribution and effectiveness of carbon reduction measures for sites and offices;
- It helps the decision-makers to grasp the real-time carbon emissions of the Group, so as to formulate corresponding countermeasures and serve as the basis for the development, trading and management of carbon assets in the future.

The Group will continue to share the findings of O·PARK2 carbon neutrality pilot project in the Sustainable Development Report and on the project website to promote the low carbon transformation of the construction industry.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Technological Innovation

The Group combines its experience in all aspects of design and construction with innovative technologies, including BIM technology and MiC construction technology, and applies them to the entire building life cycle to practice low-carbon and environmentally friendly construction.

Design, construction, operation and maintenance using BIM7D innovative technology platform

We have adopted the BIM technology in the project to guide the completion of collision checks through 3D models, simulate the construction processes through 4D models, and guide the actual operation through 6D models. We have achieved the LOD500 operation model, which includes the functions of each element in the actual building, assists in the commissioning and management of the facility, a level of detail rarely seen in BIM projects in Hong Kong. This is another example of the Group's leadership in the high-end development of the construction industry.

The project has also explored the use of BIM 7D, linking the model to the Construction Industry Council's (CIC's) Carbon Assessment Tool to streamline the carbon assessment process.

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Adoption of MiC and Design for Manufacturing and Assembly (DfMA)

MiC technology was used to build the O·PARK2 site office. About 70% of the construction was completed in factories in mainland China, and the manufactured components were sent to Hong Kong for on-site assembly, significantly reducing construction time and the resulting disruption and pollution, while also improving project quality. Upon completion of the project, the office can be disassembled and recycled. Further, the DfMA building method will be used in some engineering works of O·PARK2 to further reduce the carbon footprint of the construction.

According to the internal estimation of CSCI, in comparison with the traditional construction method, MiC technology of CSHK can reduce:

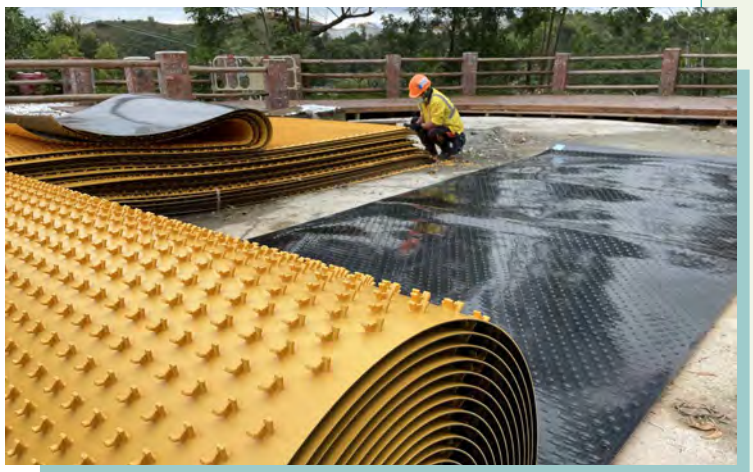
- timber consumption by 80%
- noise and construction waste generation by 60%
- human resources by 50%

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Introduction of innovative materials

We have adopted innovative materials and technologies for corrosion protection, including fiber cement, iron powder modified cement, high-density cast-in protective layer, etc., to ensure the equipment for food waste treatment process is acid-resistant, high temperature-resistant, anti-aging, and anti-wear, etc. This will in turn, extend the life of equipment and contribute to the sustainable development.



Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Support for Voluntary Emission Reduction Projects

The Group has made every effort to reduce the carbon emissions from the construction of the project; however, there will still be remaining carbon emissions being generated due to the current construction methods and technologies. The Group will take the initiative to purchase voluntary emission reduction credits to offset the remaining carbon emissions and achieve carbon neutrality during the construction period of the project.

At present, a number of certified Voluntary Emission Reduction (VER) project standards have been published internationally and in Mainland China. For instance, the Gold Standard, the Voluntary Carbon Standard (VCS), and the China Certified Emission Reduction (CCER), etc.

Based on the actual needs of the O·PARK2 pilot project, the Group will consider factors such as the extent of application of the VER standard and its applicability in deciding which project to purchase VERs from.

Carbon Neutrality Roadmap during Construction Period

Based on the project experience of O·PARK2, the Group has formulated the following carbon neutrality roadmap during construction period. In the future, this action plan can be practiced in the construction project to implement carbon neutrality during the construction period.

Carbon Accounting and Emission Sources Identification	Development of Carbon Reduction Strategy	Annual Carbon Reduction Performance Report	Third-Party Carbon Audit	Carbon Offset	Results Release
• Conduct comprehensive accounting of carbon emissions from construction materials and construction processes • Examine the project carbon footprint	• Announce carbon neutrality commitment • Develop a comprehensive carbon reduction strategy • Implement the strategy during construction	• Calculate the actual annual carbon footprint • Evaluate and adjust the carbon reduction strategy	• Independent third-party carbon auditing bodies are engaged to audit and verify the carbon emission data for construction work	• Account for the actual carbon emissions after the project is completed • Purchase carbon credits to offset the remaining carbon emissions	• Research and summarize carbon neutrality measures, such as the MiC technology, etc. • Apply for carbon neutrality certification and publish the carbon neutral results of the project

Low-Carbon Environmental Protection

Carbon Neutral Construction and O·PARK2

Future Outlook

With the commissioning of O·PARK2, the decrease in use of fossil fuel for electricity generation together with the reduced amount of organic waste landfilled will prevent the emission of some 67,000 tonnes of greenhouse gases annually, and reduce about 110,000 tonnes of food waste to be disposed of at landfills in Hong Kong annually and handled around 8% of food waste in Hong Kong. In addition to providing electricity and water for its own facilities, the surplus biogas produced can be converted to electricity, sufficient for use by some 5,000 households. The Group is actively exploring the possibility of developing carbon assets in the project operating period to achieve a negative carbon economy throughout the project life cycle.

Moreover, based on the experiences achieved from O·PARK2 carbon neutrality actions and the carbon sequestration, the Group is studying the possibility of practicing carbon neutrality in other engineering projects. The practice will be initiated via two types of engineering projects, the design-construction contracts and projects targeting at BEAM Plus Platinum Certification. The former one has the conditions for the overall planning of low carbon practices for all life cycle including design, materials selection, construction; the later one has a solid foundation for sustainable development and can help reduce the difficulties of achieving carbon neutrality. We will continue to build on O·PARK2's carbon reduction experience and carry out low carbon transformation at other sites to assist the Group in its sustainable development strategy.

In addition to the pilot project of carbon neutrality during the construction period, the Group will continue to promote the in-depth integration of low-carbon and environmental protection with corporate strategy, production and operation, technological innovation, and cultural development to enhance the company's "green" competitiveness. The Group plans to launch a series of exploration programs in the future, including exchanges with colleges and universities on research topics related to carbon reduction, promoting cooperation between the construction industry and research institutions, and stimulating technological innovation through the sharing of information and technological achievements, promoting the transformation of achievements and industrial upgrade, and transforming research results into products and services with business value. In addition, the Group will continue to explore the feasibility of developing green buildings and carbon assets during the construction period, fully cooperate and support the low-carbon economy transition in the Greater Bay Area, and actively promote the development of the carbon trading market.

The Group will work closely with the national and HKSAR carbon neutral development policies to promote the sustainable development of the construction industry. It will also work with various sectors to explore innovative construction methods and opportunities for carbon reduction.

Addressing Climate Change

Green Finance

In November 2021, the Group was certified by the Hong Kong Construction Industry Council Sustainable Finance Certification Scheme (Certification Scheme) as one of the first 16 accredited organizations, representing the Group's compliance with international and local ESG standards as well as bank's requirements for ESG products, demonstrating the Group's leading sustainability status in the industry and laying an excellent foundation for developing sustainable financing.

Under this certification scheme, the Group has completed two sustainable development related loans with interest rates linked to ESG performance, and will receive preferential interest rate if the Group achieves its objectives. The Group will continue to improve its sustainability performance and actively explore opportunities arising from the use of a variety of green financial instruments.

The Hong Kong Construction Industry Council has launched this certification scheme to tie in with the policies of the SAR Government and to promote Hong Kong as a sustainable green city, providing a common framework and a transparent assessment system for the construction industry. The certification scheme promotes sustainability assessment and certification of projects and construction materials for the entire construction industry, including developers, contractors, subcontractors, suppliers, etc., and improves access to green financing, with a view to promoting more green and sustainable projects in the industry.

Climate-Related Disclosure

The Group understands that climate change presents a range of challenges and opportunities that have far-reaching implications for the Group's future business strategy and sustainable development. In December 2021, the Group became a supporter for the Task Force on the Climate-Related Financial Disclosures ("TCFD"), the first organization in the construction industry in China. Aligning with advanced international standards and practices, the Group is exploring climate change risk factors in accordance with the recommended framework by the TCFD, focusing on four areas of management, strategy, risk management, indicators and targets, which are organically integrated with the Group's investment decision-making and risk management system to enhance climate risk management capability and information disclosure level.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Addressing Climate Change

What is TCFD?

At the end of 2015, the Financial stability Council established an industry-led TCFD in response to the Paris climate agreement. With the objective of developing a consistent climate-related financial disclosure framework, the Taskforce has promoted greater transparency in information to enable enterprises to provide information to lenders, insurance companies, investors and other stakeholders, and to help the markets understand the risk exposure of financial systems to climate change. The TCFD was widely supported and adopted by international governments and regulatory agencies and subsequently issued more guidelines since the publication of its recommendations in 2017.

The Group has commissioned a team of international professional consultants to assist it in conducting climate scenario analysis, identifying the physical and transition risks that the Group will face in 2030 and 2050, and assessing the financial impact of these risks, in accordance with regulatory requirements and recommendations of the TCFD. Scenario analysis is a systematic and scientific management tool used to identify problems or opportunities a company may face over a period of time. For the first time, the Group focused on its Hong Kong operations, which are representative of its headquarters and project types, and explored the impact of changes in physical, economic and regulatory external conditions on its business in the region to inform strategic planning and adjustments.

The Scenario Analysis is divided into two phases. The first phase is based on the representative concentration paths (RCPs) of the Intergovernmental Panel on Climate Change (IPCC) and the research and development model for climate scenarios published by the Organization for Economic Cooperation and Development (OECD) and the International Energy Agency (IEA) in 2017. It focuses on assessing the impact of climate-related physical risks on projects under construction and property holdings under 2° C and 4° C scenarios, as well as policy and the impact of transition risks such as policies and markets on overall revenues. The second phase will further analyze the financial data responses of the identified impacts to assist the Group in adjusting its climate strategy. A summary of the Phase 1 analysis is set out in the following table:

Addressing Climate Change

2℃ Scenario

Scenario Description

As climate change related laws and regulations have increased and more carbon pricing instruments and markets have been introduced, greenhouse gas emissions have been effectively controlled and are expected to decline after 2040. The frequency of extreme weather events will still increase compared to the current situation.

Business Impact

- An increased likelihood of heavy rainfall and heavy winds conditions after 2030 may disrupt construction and operations, causing delays in construction.
- Continuous and extensive precipitation may cause potential damage to equipment and materials, as well as increase health and safety hazards such as workers slipping.
- Drought and high temperature conditions are unlikely to occur and have limited impact.
- Laws and policies continue to increase the cost of compliance associated with carbon emissions and may even result in operating losses of the enterprise.
- High-emission suppliers, such as construction material suppliers increase costs due to carbon pricing and will most likely to pass it on to the material pricing.

Addressing Climate Change

2℃ Scenario

Key Risks	Type of Risk[3]	Time Interval[4]	Recommended Measures
Extreme precipitation leads to business interruption and loss of assets	Physical Risk (Acute)	Short to Long Term	- To enhance the design and management of buildings in this area, taking into account the increased likelihood of the potential heavy precipitation events; - To consider strengthening the long-term waterproofing and flood resistance finishes and materials at lower floors; - Conduct specific construction site flood risk assessment; -Improve emergency management and emergency evacuation plans in the flood
The increase in average precipitation affects the business	Physical Risk (Chronic)	Medium to Long Term	
Business interruption and loss of assets due to the storm	Physical Risk (Acute)	Short to Long Term	- Perfect emergency management and emergency evacuation plans in high wind conditions - Install appropriate storage facilities to ensure the safety of materials and equipment
Business interruption due to other climatic factors such as drought and high temperature	Physical Risk (Acute and Chronic)	Long Term	- Regularly assess the risk impacts to ensure that it is under control
Carbon pricing leads to increased compliance costs	Transition Risk (Policy and Legal)	Medium to Long Term	- Set targets and specific action plans to reduce greenhouse gas emissions - Perfect the Scope 3 emission data
Carbon pricing leads to increased acquisition costs for construction materials	Transition Risk (Market)	Medium to Long Term	- Increase the use of low carbon materials - Support suppliers in developing green processes and technologies
Carbon pricing leads to increased costs for other materials purchases	Transition Risk (Market)	Long Term	

[3] Refer to the TCFD Risk Classification.

[4] Short term: 2021 to 2025; Mid term: 2026 to 2030; Long term: 2031 to 2050 (i.e. Hong Kong Carbon Neutral and Target Year).

Addressing Climate Change

4℃ Scenario

Scenario Description

Limited implementation of relevant climate change rules and regulations is not sufficient to reduce greenhouse gas emissions. As a result, global temperatures continue to rise and extreme weather conditions become more frequent, posing a threat to assets and people's health.

Business Impact

- Heavy rain and windy weather are highly likely to disrupt construction and operation, causing delays in the works.
- Continuous and extensive precipitation may cause potential damage to equipment and materials, and may also increase health and safety hazards such as workers slipping.
- Drought and high temperatures are unlikely to occur, but business activities will be disrupted if they occur.
- Some laws and policies may increase the cost of compliance and procurement related to carbon emissions, but have limited impact.

Addressing Climate Change

4℃ Scenario

Key Risks	Type of Risk	Time Interval	Recommended Measures
Extreme precipitation leads to business interruption and loss of assets	Physical Risk (Acute)	Short to Long Term	The response method is broadly the same as that of 2℃ scenario, but the specific scope and intensity of actions will be adjusted according to the actual financial impact.
The increase in average precipitation affects the business	Physical Risk (Chronic)	Medium to Long Term	
The storm caused business disruption and loss of assets	Physical Risk (Acute)	Short to Long Term	
Business interruption due to other climatic factors such as drought and high temperature	Physical Risk (Acute and Chronic)	Long Term	
Carbon pricing leads to increased compliance costs	Transition Risk (Policy and Legal)	Medium to Long Term	
Carbon pricing leads to increased acquisition costs for construction materials	Transition Risk (Market)	Medium to Long Term	
Carbon pricing leads to increased costs for other materials purchases	Transition Risk (Market)	Long Term	

The Group believes actively adopting the TCFD framework to identify risks and disclose data can improve the Group's overall risk management capability and disclosure level, better stakeholders' understanding of the risks involved and improve transparency of investment information. These assessments and analyzes reveal the impact of climate change on the Group's operations and financial performance, help formulate the forward-looking deployments, improve the Group's climate adaptability in the long run and move toward the Group's goals in its sustainable development roadmap.

Environmentally Friendly Construction

The operation and development of a company inevitably affects the environment in its operating location and surrounding areas. In line with its sustainability approach and policies, the Group continues to improve its environmental management systems and to promote environmental initiatives and measures. Through the promotion of a business model that harmonizes between business activities and environmental protection, the Group contributes to the creation of resource-efficient, environmentally friendly and resilient communities.

Environmental problems affect the health and well-being of society as a whole. It has become an important international trend for companies to embark on road of green development. The construction industry is characterized by being an industry that is high in resource consumption, and emissions, thus rapid transformation to reduce environmental impact is needed. The Group is committed to serving as a leading example for the construction industry by creating a better environment for society. At the same time, as environmental laws and regulations become more stringent, the Group must strengthen its environmental management to avoid violations of laws and regulations during the construction process that will ultimately affect the reputation of the Group and its chances of winning new contracts.

Environmental management system

The Group pays close attention to the importance to environmental protection and has established an environmental management system that follows relevant standard operating procedures. The Group is committed to complying with environmental laws, regulations, contracts and other relevant requirements such as preventing pollution, reducing construction waste and natural resource consumption in its business operations. The Group's sustainability policy also provides for the management of important environmental issues, including emissions disposal, resource use, natural resource conservation and climate change. The Group requires all subsidiaries to understand the environmental characteristics and requirements of their region to establish and implement specific management strategies that meet those requirements.

The Group continues to consolidate and strengthen its management systems and mechanisms to implement environmental protection in its day-to-day operations. It has established an environmental management system based on ISO 14001:2015, and its major subsidiaries have successfully passed annual internal or/and external audits. The projects of the Housing Department of CSHK and its subsidiaries have also passed the annual audit of the ISO 50001:2018 Energy Management System.

The Group's Safety Management department is responsible for environmental management, formulating annual and long-term environmental plans, while reviewing and maintaining environmental management plans for various projects, supervising the implementation of environmental protection measures in the course of construction, and promoting new technologies for environmental protection. The Group implements a construction plan, a review system and holds a review meeting before commencement to ensure that the construction plan includes appropriate and effective environmental protection measures, such as noise barriers and dust nets to reduce the impact on the surrounding environment.

The Group always adheres to building compliances, and we have put green development into practice through comprehensive and solid management. To reduce carbon emissions from construction, we have elevated the digitization, refinement, and intelligence of construction site management, thus improving the efficiency of using natural resource utilization, reducing the generation of construction waste while complying with green procurement policies to reduce the environmental impact on the supply chain. In addition, the Group has strived to enhance the disclosure of carbon-related information. The Group will continue to improve environmental efficiency in our operations, enhance site environmental management performance, and reduce the negative impact of our business on the environment through multi-departmental collaborative environmental management systems, internal system audits, as well as implementing practical measures to support green buildings and promote environmental awareness.

The principal laws and regulations applicable to the Group include the Environmental Protection Law of the People's Republic of China, the Air Pollution Prevention and Control Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, as well as Air Pollution Control Ordinance, Water Pollution Control Ordinance, Waste Disposal Ordinance, Noise Control Ordinance, Environmental Impact Assessment Ordinance, Dumping at Sea Ordinance of Hong Kong and the Environmental Base Law and Construction Material Waste Management Regime of Macau. During the Reporting Period, the Group was not involved in any violations of laws relating to environmental protection.

Air pollutants

In 2021, the Group's air pollutants were mainly derived from fossil fuel consumption. Nitrogen Oxides, Sulphur Oxides and Respirable Suspended Particulates in CSHK account for 78%, 79% and 93% of total emissions respectively, while Nitrogen Oxides and Sulphur Oxides in CSCIICL's operations account for 18% of the total emissions. Construction dust is also one of the major air pollutants that the Group needs to control. To reduce dust emissions, the Group uses high-pressure water lances and sprinkler systems to clean incoming and outgoing vehicles, installs automatic water sprinklers to keep work areas wet, lays concrete slabs or uses dust nets, dust geotextiles and wind and dust walls on some grounds to reduce dust dispersion, and uses monitoring devices to monitor the site environment in real time.

Greenhouse gases and energy

The Group has been recording and monitoring data from its business activities to assess and disclose its GHG emissions. The quantitative process and emission factors are with reference to national standards and guidelines of the People's Republic of China, guidelines compiled by the Hong Kong Environmental Protection Department and the Electrical and Mechanical Services Department, guidelines compiled by the University of Hong Kong and the City University of Hong Kong, as well as the international standard ISO 14064–1 and the GHG Protocol. These data are presented by region, providing stakeholders with a comprehensive carbon footprint and a review of the Group's performance.

Scope	Hong Kong	Macau	Mainland China	Total GHG emissions by scope	Unit
Scope 1: Direct greenhouse gas emissions[6]	73,550	4,994	20,970	99,515	Tonnes of CO_2-e
Scope 2: Indirect greenhouse gas emissions from energy[7]	5,936	14,599	61,821	82,357	Tonnes of CO_2-e
Total greenhouse gas emissions by region (ranges 1 and 2)	79,486	19,593	82,791	181,871	Tonnes of CO_2-e
Scope 3: Other indirect greenhouse gas emissions[8]	24,773	628	19,970	45,371	Tonnes of CO_2-e
Total greenhouse gas emissions by region (ranges 1,2 and 3)	104,259	20,222	102,761	227,242	Tonnes of CO_2-e
Greenhouse gas emission density (in terms of turnover)	—	—	—	3.1	Tonnes of CO_2-e/million HKD

[6] Includes stationary sources, fossil fuel combustion from mobile sources, fugitive emissions from fire extinguishing systems and greenhouse gases released by industrial production soldering processes. The Group emits the following species of greenhouse gases: carbon dioxide (CO2), methane(CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs) and bromotrifluoromethane (BTM). The use of BTM (bromotrifluoromethane) in fire suppression systems produces fugitive greenhouse gas emissions, which are not among the six greenhouse gases in the Kyoto Protocol, but are included in this carbon assessment in order to give a true and fair representation of greenhouse gas-related information. It is also one of the controlled substances in Annex A of the Montreal Protocol and is approximately 1.0 tonnes of CFC-11 (trichlorofluoromethane) equivalent. Global warming potential values ("GWP") from the 100-year time scale values of the Intergovernmental Panel on Climate Change ("IPCC") Fifth Assessment Report (AR5).

[7] These include the purchase of electricity, the outsourcing of heat, and the provision of greenhouse gases by the Group at construction sites to the use of electricity by the contractors.

[8] These include greenhouse gases released by the Group's business travel by plane, the burning of fossil fuels by its contractors, and waste paper disposal, water use and sewage treatment in CSHK.

The Group continued to engage an external consultant, British Standards Institution (BSI) for this Reporting Year to conduct GHG data verification in accordance with ISO 14064–3 "Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements" to ensure the reliability and accuracy of GHG data. During the Reporting Period, the Group verified data on 10 projects in Hong Kong, Macau and Mainland China and considered extending the data verification to other projects in the future.

Based on the results of the GHG assessment, the Group's GHG emissions from Scope 1 fossil fuel combustion mainly accounted for 41%, with the highest proportion of the emissions from CSHK projects accounted for 69%. Greenhouse gas emissions from external sources of energy (including electricity and heat) accounted for 37% of Scope 2 emissions, with the highest proportion of emissions from operations in Mainland China, accounting for 81%. The Group achieved energy savings and emission reduction through the use of solar and energy-saving lamps in construction sites and the strengthening of publicity on energy-saving practices. A total of around 334 megawatt-hours of renewable energy has been consumed.

Category	Consumption	Unit
Direct Energy		
Gasoline	22,001	Megawatt hour
Diesel fuel	330,535	Megawatt hour
Liquefied petroleum gas	1,353	Megawatt hour
Liquefied natural gas	81	Megawatt hour
Pipeline gas	1,694	Megawatt hour
Acetylene	758	Megawatt hour
Natural gas	5,385	Megawatt hour
Methanol	354	Megawatt hour

Category	Consumption	Unit
Indirect energy		
Purchased electricity	148,906	Megawatt hour
Purchased Heat (including steam and hot water)	3,981	Megawatt hour
Total energy consumption	515,047	Megawatt hour
Energy Intensity (by turnover)	7.1	Megawatt hour/million HKD

During the Reporting Period, the Group's total energy consumption was 433,526 megawatt hours, of which Hong Kong accounted for more than half of the total energy consumption, at approximately 54%, followed by Mainland China for about 40%. Hong Kong accounted for 30%, 79% and 63% respectively of the total consumption of gasoline, diesel fuel and acetylene. Direct energy sources other than gasoline, diesel and acetylene, as well as indirect energy sources including 78% of purchased electricity and 87% of purchased heat energy, were used in Mainland China.

Through continuing to assess, record and disclose annual greenhouse gas emissions and energy use data, the Group can review the effectiveness of its current initiatives, which will help to further develop its energy efficiency and reduction targets in the future.

Water

The Group recognizes that water is a valuable resource and is committed to conserving and reusing water in its operations. The water used by the Group is mainly supplied through municipal water supplies or other public or private entities, and the Group has not encountered any problems in terms of water sources. Most of the Group's intake of water in Mainland China does not come from areas with water stress, while most of the discharges are fresh water. Furthermore, neither Hong Kong nor Macau projects are drawn from areas with water stress, and all the discharges are also fresh water.

The Group collects rainwater for usage and installs sedimentation tanks and sewage treatment facilities on construction sites to recycle sewage as much as possible. A total of nearly 200,000 cubic meters of wastewater have been reused in our projects, mainly for concrete mixing, finished cleaning, road and site vehicle washing. The Group's operations inevitably generate domestic, construction and industrial wastewater. By installing appropriate wastewater treatment facilities, all wastewater is treated and discharged in accordance with local laws and regulations.

Category	Amount of water consumed/discharged	Unit
Source of water withdrawal		
Surface water	461,519	Cubic meters
Groundwater	379,594	Cubic meters
Sea water	518,472	Cubic meters
Municipal water supply or third party water	4,114,575	Cubic meters
Total water consumption[9]	5,474,160	Cubic meters
Water consumption density (by turnover)	75.2	Cubic meters/million HKD

[9] This includes the use of water supplied by the Group to the contractors at construction site.

Category	Amount of water consumed/discharged	Unit
Effluent distination		
Surface water (discharged to natural water bodies (rivers or lakes, etc.) after being treated by sewage treatment facilities)	938,113	Cubic meters
Groundwater (discharged into groundwater after being treated by sewage treatment facilities)	65,306	Cubic meters
Communal stormwater drains (discharged after being connected to the municipal pipe network)[10]	2,304,423	Cubic meters
Communal sewers (discharged after being connected to the municipal pipe network)	1,510,099	Cubic meters
Total water consumption	4,817,940	Cubic meters
Water consumption intensity (by turnover)	66.2	Cubic meters/million HKD

[10] Mainly includes wastewater generated during the construction of the Hong Kong sites, which is treated by the on-site sewage treatment facilities (suspended sedimentation and acid-base neutralisation) and discharged into stormwater drains in accordance with the requirements of the sewage discharge permit after reaching the discharge standard.

Waste

The Group optimizes design, process and material management to improve resource efficiency and reduce waste. Hazardous and non-hazardous wastes from construction and production processes and office operations are handled strictly by adhering to relevant local regulations. Non-hazardous wastes, such as construction demolition materials and used concrete components from the factories, are stored in dedicated areas of the sites and factories and then cleaned and transported in accordance to regulations. Soil and construction demolition materials are recycled whenever possible. Hazardous wastes, such as chemical wastes, Class II marine sediment, biopile and cement solidification, metal-containing sludge from sewage treatment facilities, fluorescent lamps and so on, have been commissioned to qualified units for disposal.

Category	Amount of waste generated	Unit
Hazardous waste		
Total hazardous waste[11]	16,927	Metric tons
Hazardous waste Density (by turnover)	0.23	Metric Tons per million HKD
Non-hazardous waste		
Construction material	2,851,691	Metric tons
Other non-hazardous waste	70,331	Metric tons
Total amount of non-hazardous waste	2,922,023	Metric tons
Non-hazardous waste density (by turnover)	40.15	Metric Tons per million HKD

[11] Hazardous wastes include chemical and other hazardous wastes.

Disposal method	Amount of hazardous waste generated[12]	Amount of non-hazardous waste generated	Unit
Reuse	25	427,743	Metric tons
Recycling	0	33,713	Metric tons
Combustion (being sent to incinerators)	0	1,042	Metric tons
In-situ storage	16,670	217,769	Metric tons
Landfill (being to landfills)	0	225,577	Metric tons
Landfill (being sent to public fill reception facilities of the government)	0	2,016,178	Metric tons
Processed by qualified contractors	155	0	Metric tons
Marine dumping[13]	77	0	Metric tons
Total waste	16,927	2,922,023	Metric tons
Waste intensity (by turnover)	0.23	40.15	Metric Tons per million HKD

Promote environmental protection

The Group understands that all environmental initiatives require the joint efforts of employees, business partners and customers. Its Employee Handbook states that employees are responsible for understanding, complying with and implementing the Group's environmental policies and practices. Environmental management is integrated into performance reviews for all projects and employees. Employee bonuses, promotions, and salary increases are all based on environmental performance.

The Group regularly arranges various environmental-related training, including construction noise permit application training, environmental coordinator training and environmental training for new joiners, to enhance employees' environmental knowledge, awareness and management capabilities. The Group's roadmap also plans to enhance relevant trainings on low carbon and sustainability to enable staff to understand the importance of the issue and to acquire relevant knowledge.

The Group continued to follow closely on global trends and developments on environmental protection, particularly in the construction industry, so as to adjust its management methods and organization of work in a timely manner. Based on our sustainability roadmap, the Group planned to assign its objectives to its subsidiaries and to monitor continuously the environmental management performance of its premises.

Social responsibility

The Group has been engaged closely with various stakeholder groups in the society, maintaining and strengthening long-term mutually beneficial relationships with employees, customers, business partners and the public. The Group upholds the core values of "putting customers first, guaranteeing quality and creating value", which creates a happy life for our stakeholders, achieving an overall a win-win situation with each group.

Work safety and health

Health and safety have always been key issues in the construction industry, and their importance has become even more prominent in the COVID-19 pandemic. The Group understands that good health and security management is essential to gaining the support of employees and partners, earning trust from customers and the public, and maintaining the Group's operations. It has adopted various measures and advanced technologies to minimize safety hazards and protect the safety and health of employees, business partners, customers and the public.

The Group has established the "Production Safety Supervision Management System" and the "Production Safety Responsibility List", which clearly define the responsibilities of all departments and personnel of the Group. Under this system, the Group has established a Safety Management Department, chaired by the Chief Executive Officer, to lead other keys stakeholders, including Vice Presidents, Finance Director, Security Director, and Assistant Director of Human Resources of its subsidiaries, etc., adopting the principle of "safety first, prevention first, comprehensive management", making decisions on the Group's overall security management system.

The decisions of Safety Management Department are implemented by each member of the Department in accordance with his or her area of responsibility. The Safety Director and the Safety Management Department (the "Safety Management Supervision Department") are responsible for monitoring the implementation and reporting regularly to the Board and the Safety Management Department. The Safety Management Supervision System sets out the safety management practices for different types of subsidiaries and project, such as

management requirements for production safety planning, training, technology, costs, hazard identification and risk assessment, equipment safety, safety inspection and risk assessment, emergency management, subcontractors and occupational health and other four categories of business, including construction, professional and technical, infrastructure investment and operating businesses. There are also specific provisions for safety incident management, safety evaluation and continuous improvement.

The principal laws and regulations with which the Group is required to comply include the Production Safety Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases, the Administrative Regulations on the Work Safety of Construction Projects of the People's Republic of China, the Occupational Safety and Health Ordinance of Hong Kong, the Factories and Industrial Undertakings Ordinance of Hong Kong and the Regulations for the Safety and Hygiene of the Construction Industry of Macau. During the Reporting Period, the Group received 16 fines ranging from $3,000 to $50,000 for site safety violations that occurred between 2019 and 2020. In the future, the Group will continue to strengthen the management of construction site safety and to strive to comply with all applicable legislation.

The Group's occupational safety and health management system complies with internationally recognized standards and its subsidiary are gradually updating from OHSAS 18001 certification to the new ISO 45001 certification. Each year, CSHK and CCE Macau review and update their safety and health policies, which are issued by the subsidiary's general manager and include safety and health commitments and safety management goals for the year.

The Group's construction projects continuously identify hazards and assess risks throughout the construction process. Important hazards are compliled into a checklist and rated according to their severity and likelihood of occurrence. Hazard identification also includes consideration of personnel in the vicinity of the workplace, and employees in locations not under the direct control of the company. CSHK's Site Safety Committees is composed of site managers, engineers, foremen, subcontractor safety representatives and worker representatives. They enable workers to participate and be consulted on the implementation and improvement of the safety and health management system.[14]

The Group values feedback from workers and welcomes them to report potential safety management loopholes through various reporting channels, and stop any works that pose health hazards, to help the Group strive for excellence in production safety. It also undertakes to keep the report confidential to protect the rights and interests of the relevant personnel. If the reports is true, appropriate rewards will be given.

During the Reporting year, a total of 146 employees and workers were injured at work, while no accidental deaths occurred. The main causes of the injuries are slips, trips, tumble, falls, stab wound and collisions with objects. The Group has provided relief and compensation to the parties in accordance with the security management procedures and laws and regulations of the place of operation. Detailed procedures for handling accidents and work-related injuries have been established, including investigating serious accidents, recording the accident process, site photos, relevant drawings and witness testimonies, and reporting on improvement proposals to prevent the recurrence of similar accidents.

In addition to continuous improvement in safety production management and occupational disease prevention, the Group is also concerned about the physical and mental health of its employees. Medical and health benefits such as life, accident, medical and dental insurance, subsidies or tissue examinations are provided. The Group encourages employees to develop healthy lifestyles, such as physical exercise to relieve stress at work. Older workers working at construction sites are also encouraged to conduct simple physical examinations, such as blood pressure measurements, and remind them to take good care of their health.

[14] Further details of the Group's occupational health and safety policies, systems and practices, such as hazard identification, risk assessment and incident investigation, worker participation, consultation and communication, can be found on pages 27-32 of the Group's 2020 Sustainability Report.

Employment system and welfare

A corporation is created and operated by employees, while policies and initiatives are implemented by employees. This means employees are the ones who create value for the corporation. The Group is well aware that attracting and developing talent is the key to the Group's prosperity and development. We are committed to protect the benefits of its employees and are willing to share the results with them. We strive to create a diverse and inclusive work environment where employees can demonstrate their talents and grow with the Group.

Upholding the human resources mission of "To Assemble the Enterprising Ones and Motivate the Promising Ones" of COHL, the Group has formulated human resources management policies and systems, which are implemented by the Human Resources Department. The Group provides competitive remuneration packages and employee benefits, regularly reviews the remuneration system, establishes a talent echelon, implements assessment and incentives, and builds a talent pool. As of 31 December 2021, the Group employed 9,807 staff[15], all of whom were full-time employees. The following shows the statistical breakdown of staff.

			Male	Female
Total number of employees			**7,698**	**2,109**
By employment contract	Unlimited term/permanent	Hong Kong	4,239	1,155
		Macau	672	224
		Mainland China	547	184
	Fixed term/temporary	Hong Kong	11	4
		Macau	235	34
		Mainland China	1,994	508

	Male	Female	Hong Kong	Macau	Mainland China
Total number of employees	7,698	2,109	5,409	1,165	3,233
Rate of new hires (monthly paid)	27%	28%	32%	42%	16%
Rate of employee turnover (monthly paid)	20%	23%	28%	5%	16%

[15] Only employees within the Reporting Boundary are included, employees of CSC Development are not counted.

The Group concludes employment contracts with its employees that comply with the laws of the places of operation. The rights and responsibilities of employees are also set out in the Employee Handbook, which stipulates employees' salaries, working hours, holidays and benefits. In addition to a basic salary and statutory entitlements, the Group provides employees with various leaves such as paid annual leave, wedding leave, bereavement leave, examination leave and birthday leave, as well as benefits such as travel allowance, relocation allowance, marriage vouchers and long service awards. It also pays for five social insurances and one housing provident fund for mainland employees. Besides, professional qualification subsidies, employee canteen or meal subsidies, and corporate annuities are provided.

Through various channels, the Group maintains communication with its employees and builds trust, such as organizational team building and employee care activities. The Group also creates a cohesive and effective collaboration team by publishing internal communications to keep employees informed of the latest developments in the Group and to enhance employee cohesion and a sense of belonging.

The principal laws and regulations relating to the Group's employment management include the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China, the Employment Ordinance of Hong Kong and the Labour Relations Law of Macau. The Group complies with the relevant laws and regulations and has established appropriate procedures in the recruitment process, including the examination of candidates' identity cards and other supporting documents to prevent wrongful recruitment of child labour, and the confirmation of the willingness of candidates to work in order to eliminate forced labour. During the Reporting Period, no cases of violation of the law relating to employment were identified. The Group regularly reviews its risk management and internal control systems to ensure that effective measures are in place to avoid employment risks such as child labour, forced labour and discrimination.

Considering the large number of subcontractors involved in the construction industry, the Group is committed to protecting the interests of the workers concerned. Labour officers are stationed at each construction sites to handle labour relations matters, including receiving workers' complaints, maintaining workers' attendance records in the registration system, proactively following up on subcontractors' wages, and managing and monitoring subcontractors' labour rights. Statements are posted at conspicuous locations on the construction sites listing the complaint channels to ensure that workers are aware of their rights and accesses to assistance.

Attracting talent

The Group respects the diversity of individuals with different characteristics and backgrounds, attracts and gathers many outstanding talents, helps the Group better understand and meet challenges, and establish competitive advantages. The Group has established an anti-discrimination and anti-harassment policy to guide employee behavior and eliminate all forms of discrimination or harassment in the workplace. Uniform selection criteria and provide equal opportunities in recruitment, promotion, training, dismissal and employment conditions. No differences in personnel decisions or treatment based on race, disability, gender, marital status, pregnancy or family status will be tolerated. The policy also includes definitions and examples of harassment, as well as ways to file complaints and handle them if an employee experiences discrimination or harassment.

The Group recruits extensively through various channels, such as job websites, media, job fairs, headhunting companies and campus recruitment. When recruiting, the educational background, experience, skills, professional qualifications of candidates and job requirements are taken into consideration. Competitive salaries and benefits are set based on the above criteria and the level of responsibilities of the positions, and then reviewed and adjusted based on the performance, length of service and the Group's business in an effort to retain talent. The Group regularly evaluates the performance of its employees. Performance-based bonuses and other rewards are provided based on the evaluation results to encourage employees to make positive contributions to the Group.

When conducting business in a new region, the Group not only deploys management staff, but also focuses on recruiting talents locally, providing employment and development opportunities for local people, and promoting the development of the local economy, thus enabling the local community to grow together with the Group's business. It maintains ties with universities in the region where it operates, recruits fresh graduates through campus recruitment each year, and assists local employment.

The Group will expand recruitment in the next few years by recruiting more than 1,000 employees in Hong Kong each year to support the plan of COHL during the 14th Five-Year Plan period. The Group implements the "Double Hundred Youth Development Program" in Hong Kong to support the recovery of Hong Kong's economy and job market from the COVID-19 pandemic by providing at least 100 jobs in the Greater Bay Area for graduates of Hong Kong tertiary institutions and 100 Greater Bay Area internship jobs for Hong Kong students each year, as well as visits and exchanges. With the aim of carrying out basic systematic talent training and development, these young students will be able to experience the broad opportunities in the field of construction engineering, learn advanced technology related to construction, and even directly participate in the design and construction of large projects.

Staff Training

The maturing of social developments will change the business environment. Except for attracting external talents, enterprises should also pay attention to the cultivation of internal talents and improve the professional skills and competitiveness of employees, so as to keep pace with the times and meet opportunities and challenges in the future. The Group cares about the development of its employees and actively implements talent cultivation plans to establish talent pools and echelons. By closely integrating the personal growth of employees with the Group's business expansion, it strives to enhance employees' sense of identity and belonging.

The Group policy documents such as the Employees Manual, the Training Manual, the Human Resources Management System and the Training Working Procedures explains the purpose and function of training, and specify the requirements for internal and external trainings. Employees may apply to the Group for tuition reimbursement for external training on the basis of the relevant requirements. The Group has also established educational subsidies for employees who wish to obtain work-related diplomas or degrees.

With regard to internal training, the Human Resources Department is responsible for investigating training needs, developing annual training plans and coordinating implementation. The training plan is based on the group development needs, employee assessment and questionnaire, combined with senior management's discussions and Human Resources Department's observation and analysis. Besides engineering courses, the Group also provides management and other soft skills courses for its staff to provide them with fully developed equipment.

The Group has set up the Xiangjiang Management Institute to provide training for senior management, key personnel and young students, to train up a high-quality cadre force, and to study the major issues of company development. The training focuses on the Group's strategic development needs, expanding the international vision, and strengthens innovation and governance capabilities. We also focus on values education, culture, faith education and the building of good conduct. The Institute invites management and external instructors to organize comprehensive competency courses for key students, strengthen time management, leadership, emotional management and other comprehensive abilities. It also provides training courses in the two series on project management and functional management for young students. The Group builds and manages a knowledge base that compiles various training content, question banks,

courseware and videos, including work guidelines, project summaries, scientific research reports, etc. In addition, the group also organizes internal workshops to share and exchange learning results, and external exchanges and visits.

Echoing the "Thousand People Across the River Project" of COHL, 1,000 Hong Kong staff will be sent across the Shenzhen River to work in the Mainland China during the 14th Five-Year Plan period, promoting the integration of Hong Kong professionals into the Greater Bay area. This will provide an attractive platform for potential, aspiring young professionals from Hong Kong to work in the Greater Bay Area or short-term rotation before returning to Hong Kong. The Group hopes this programme will nurture high-quality, visionary individuals with and a good understanding of the overall situation of the country's development, who are also patriotic, to form the future backbone of Hong Kong's construction industry.

Engineering quality and supply chain

Buildings and infrastructure support all aspects of human life, including housing, work and travel. They have a life span of several decades or even hundreds of years. With the advancement of society, expectations and demands for building quality are constantly rising. The construction industry processes are long and complex, with a long supply chain, and can be difficult to manage. The Group has continued to build a quality management system based on the principle of "quality assurance, value creation" to improve the quality of life of its customers with first-class construction quality.

The quality of construction has always been a top priority for the Group in order to demonstrate the Group's excellent brand image in the industry. Many of the Group's subsidiaries, including CSHK and its major subsidiaries, CCE Macau and some prefabricated construction companies, have obtained the international standard ISO 9001:2015 Quality Management System certification. With the management policy of "alright for one time, alright for all times", the Group conducts regular internal audits to monitor quality performance, proposes improvement measures and continuously improves its quality management processes. Besides, the Human Resources Department organises quality management training for new employees to ensure they are familiar with the Group's quality management system and related work procedures.

The construction sites of CSHK and CCE Macau implement comprehensive management evaluations and carry out regular assessments on the quality, safety and environmental protection. A "red/yellow card" system is implemented to warn underperforming sites and their managers and to reward high performing sites. Sites in Mainland China have also formulated a project management policy, which sets out the management structure and responsibilities of various departments and posts. Work requirements and procedures for contractors, contracts and cost, project schedule, quality and technology, safety and environment are also specified.

Sustainability issues and policies

The Group has formulated a development strategy of "transferring Hong Kong standards to Mainland" and "transferring Macau standards to Mainland" to further promote the management on construction in Hong Kong and Macau to the Greater Bay Area, taking advantage of the Group's technical expertise and management experience. Creating outstanding brands in the construction industry in the Greater Bay Area and enhancing the competitive edge of building construction business differentiation. We are actively working on the management system and standards in Hong Kong and Macau, such as site area responsibility system, induction and safety training process, special process construction permit system, safety incentive scheme, internal safety card system, etc., and apply them in the projects in Mainland China. The pilot project implements the management system of the CSHK, and compiles the Project Integrated Management Program PMP, the Project Critical Construction Process Quality Control Program, and the Housing Project Quality Control Plan etc., and formulates standard quality control procedures for key construction sites and perform detail internal quality inspections. In coordination with the Quality and Technology Department to integrate and fine-tune the content of internal quality audits and high-risk inspection items based on the owner's third-party quality assessment priorities and quality control process.

The principal laws and regulations relevant to the Group's business include the Construction Law of the People's Republic of China, the Buildings Ordinance of Hong Kong and the General Regulation of Urban Construction of Macau. During the Reporting Period, no cases of violation of the law relating to the Group's responsibility for its products and services were identified. Requirements to ensure the safety and health of clients and building users are included in the relevant legislations and contract terms. The Group is committed to carrying out works in accordance with these requirements and integrating them into its quality control procedures. At the same time, clients conduct acceptance check on the building according to its standards and procedures to ensure safety compliance. The Group also works closely with its clients to gather their feedback. Besides, construction projects are generally subjected to a maintenance period that provides for follow-up services after project handover.

The Group's business requires close cooperation with many suppliers and subcontractors, whose involvement is critical to its sustainability. In 2021, the Group had 2,627 suppliers contracted out projects or sub-contracting processes to provide a wide range of construction materials including concrete, Steel, decorative materials, site equipment, plant equipment and fuel, as well as services, such as labour, design, security and consulting.

Each supplier is subject to the Group's established management procedures. The "Standard Work Procedures" of CSHK includes the "Material Procurement Work Procedures" "Construction Management, Inspection and Testing work procedures" and "Project Management Plan Preparation Guidelines". These documents cover management matters related to suppliers and subcontractors. Regular on-site management meetings are held to report on the performance of subcontractors and suppliers, assess the quality of subcontractors and material suppliers, and submit periodic assessment reports. To improve the sustainability of its supply chain, CSHK has updated its Procurement Policy and Supplier's Code of Conduct in recent years to manage and enhance cooperation with environmentally conscious suppliers.

Innovative Technologies and Applications

In recent years, with the rapid development of science and technology, the construction industry has accelerated the application of various innovative technologies to improve efficiency and strengthen management. MiC is becoming increasingly popular in Hong Kong, Macau and Mainland China and will soon bring significant innovation to the construction industry. In face of a rapidly changing market environment, enterprises must keep abreast of the times and take the initiative to explore and develop new ideas for technology in order to stay ahead of industry competition.

The Group is aware that technological innovation will be extensively permeated and deeply integrated into all aspects of society and regards innovation as the core driving force for enterprise development. The Group adheres to the development concept of "innovation, coordination, green, openness, and sharing" and adopts the principle of "keeping close to development, deepening reform, independently innovating, and strengthening incentives" to implement scientific and technological management work so that technological progress can provide the basis for the expansion of the Group's business.

The Group has formulated the "Science and Technology Management System" to explain the relevant work, which has improved the management system and organizational structure, standardized the policies on various aspects such as technology development plan, work plan, assessment incentives and results management, increased investment to R&D incentives and increased the core competitiveness of the Group.

The Technology Innovation Leadership Group, composed of the senior management, is responsible for developing technology development strategies and guidelines. The Technical Management Committee is responsible for enforce and the Technology Management Department is responsible for daily operations. The Group formulates an annual innovation project plan and sets up a budget for this purpose. The budget allows its subsidiaries to propose technical requirements and topics. Research will be initiated after approval. According to the progress of R&D, project teams will summarize and validate the innovation results of each phase for acceptance. The Group will reward high quality projects and select them to participate in external technology awards.

Institute of Construction Technology

The Group's Institute of Construction Technology, with its seven research centres, has established its R&D and innovation platform to promote technology research and applications in various aspects

1. **The Assembly Prefabricated Construction Research Centre** has a professional team across the whole industry chains, including design, manufacturing, construction, materials, and so on. Its main topics are the MiC system of concrete and steel structure, prefabricated construction, new building materials. This centre focuses on key technologies in the whole process of prefabricated construction.
2. **The Building Information Model Research Centre** studies the complete process of integrating application of BIM Technology, and explore new scenarios where BIM+ is applicable. The centre is devoted to technical training, standard development, and building component libraries. It integrates information on building materials, installation progress, and cost management into the practical application of BIM technology through developing plug-ins, using computer software, and combining AR and scanning technologies.
3. **Intelligent Construction Research Centre** incorporates 5G, VR, AI, IoT, robotics, block chain and other technologies to independently develop the C-Smart intelligent site series of products. This centre is committed to build an integrated digital construction platform that aims at real-time and comprehensive engineering management. The Group owns independent intellectual property right of C-Smart.
4. **Medical Construction Research Centre**, with a professional team of medical planning, design, construction, operation and maintenance, is dedicated to the construction technology research of modern hospitals that meet international standards and the modular hospital. This centre supports the medical construction projects and accumulates medical related construction technologies.
5. **The Hotel Construction Research Centre** focuses on the key technology of large modern hotels that meet international standards. It summarises previous hotel projects, enhances project management and coordination capabilities, and innovates key construction technologies so as to upgrade the level of hotel construction then enhance market competitiveness.
6. **Infrastructure Engineering Technology Research Centre** consists of 4 sub centres, for road and bridge engineering technology, infrastructure investment model innovation, safety technology and new green construction technology. This centre studies core construction technologies such as the control of subgrade settlement and deformation, tunnel engineering in complex geological environment, undersea immersed tunnel engineering, highway construction and maintenance, and large-scale environmental protection facilities construction.
7. **Intelligent Curtain Wall Research Centre** conducts R&D of complex curtain wall standardized design, intelligent production, and efficient installation of complete sets of technology. It upgrades the existing products and applies new technologies to enhance the technological level of curtain walls production and construction through combining the market demand and emerging materials.

In addition, the Group intends to set up a low-carbon R&D centre to echo the national development strategy and promote the development of green and low-carbon technologies to support business expansion. The new R&D centre will focus on innovative initiatives in low carbon technology, develop green low-carbon regional planning and design, corporate carbon accounting method, "dual-carbon" ecosphere and low-carbon industrial technologies, and so on. It also assists the Group in formulating a comprehensive low-carbon action plan and specific measures in technology, standards, capabilities, marketing, and so on. Besides, it explores cooperation with research institutes, universities, and social associations in Mainland China to serve as a think tank for green and low-carbon development and an important platform to help the Group to transform and upgrade.

Modular Integrated Construction (MiC) Business

In recent years, the Group has strongly promoted and developed prefabricated construction technology. Among them, the "Modular Integrated Construction" (MiC) is a technology known as prefabricated construction 4.0. It enables the construction of structural, decoration, plumbing, electrical, fixture, piping and sanitary facilities of building modules to be completed in the production plant modules to be installed quickly on site. The Group's technology has been able to move 90% of the processes in the traditional construction to intelligent factories. MiC has the following features and benefits:

1. **Industrialisation:** Traditional manual on-site construction process is transferred to a factory, where standardised designs and automated machinery are used for mass production, structure, decoration and equipment are integrated, and HVAC, electrical, fire protection, and other equipment are prefabricated. The productivity, accuracy and quality are improved simultaneously.

2. **Greening:** Since production processes are transferred to factories, dust and noise on construction sites is greatly reduced. Building materials are used more efficiently therefore less wastage and facilitate reuse through modular design and in factory environment. Aluminium or plastic templates can be reused multiple times. Construction waste can be reduced to one-fourth of the traditional method, and it is easier to recycle wastewater in the factory than on site.

3. **Economisation:** Construction duration can be shortened by 80% compared to traditional construction, reducing management costs and financial interest expenses, generating more profits with an earlier opening and accelerating payment collection, and reducing uncontrollable risks. The total project labour can be reduced by 20%. As material loss and construction waste are also reduced so raw material costs are lower. The design or specifications of the module can be applied to other projects. Temporary buildings can be disassembled and reassembled for reuse.

4. **Informationisation:** Building Information Simulation (BIM) and Intelligent Site System C-Smart are used to manage the production. The BIM system creates the digital twin of the building, which can be used to navigate to equipment and systems, view information and documents in real time, and facilitate the construction process and operation. Combined with IoT technology, it could also be used in maintenance. The Intelligent Site System combines Augmented Reality (AR), Virtual Reality (VR) and other technologies to provide comprehensive, full-cycle monitoring to ensure production and on-site construction command.

What is MiC?

In 2021, the Group successfully promoted the use of the MiC technology to a wide range of scenarios. Apart from quarantine facilities and the hospital of the negative pressure wards, it has also been applied to other of building types, such as hotels, apartments, offices, schools and exhibition halls. MiC housing is a global trend and is one of the fastest growing markets in the construction industry. In the regional markets, both the Hong Kong and Shenzhen governments actively support it. The HKSAR government has stipulated that public buildings with a gross floor area of more than 300 square meters must adopt the MiC. Private developers using MiC construction are also granted gloss floor area (GFA) concessions. Shenzhen also sees MiC as an important channel for industrialisation and low carbon transformation of construction industry. The Group will continue to build China State Hailong Construction Technology Company Limited ("Hailong") a leader in technological R&D, and cooperate with the government to nurture relevant industrial chains.

For more basic information on MiC and its benefits, please refer to the Group's Sustainability Report 2020.

C-SYS + Architecture

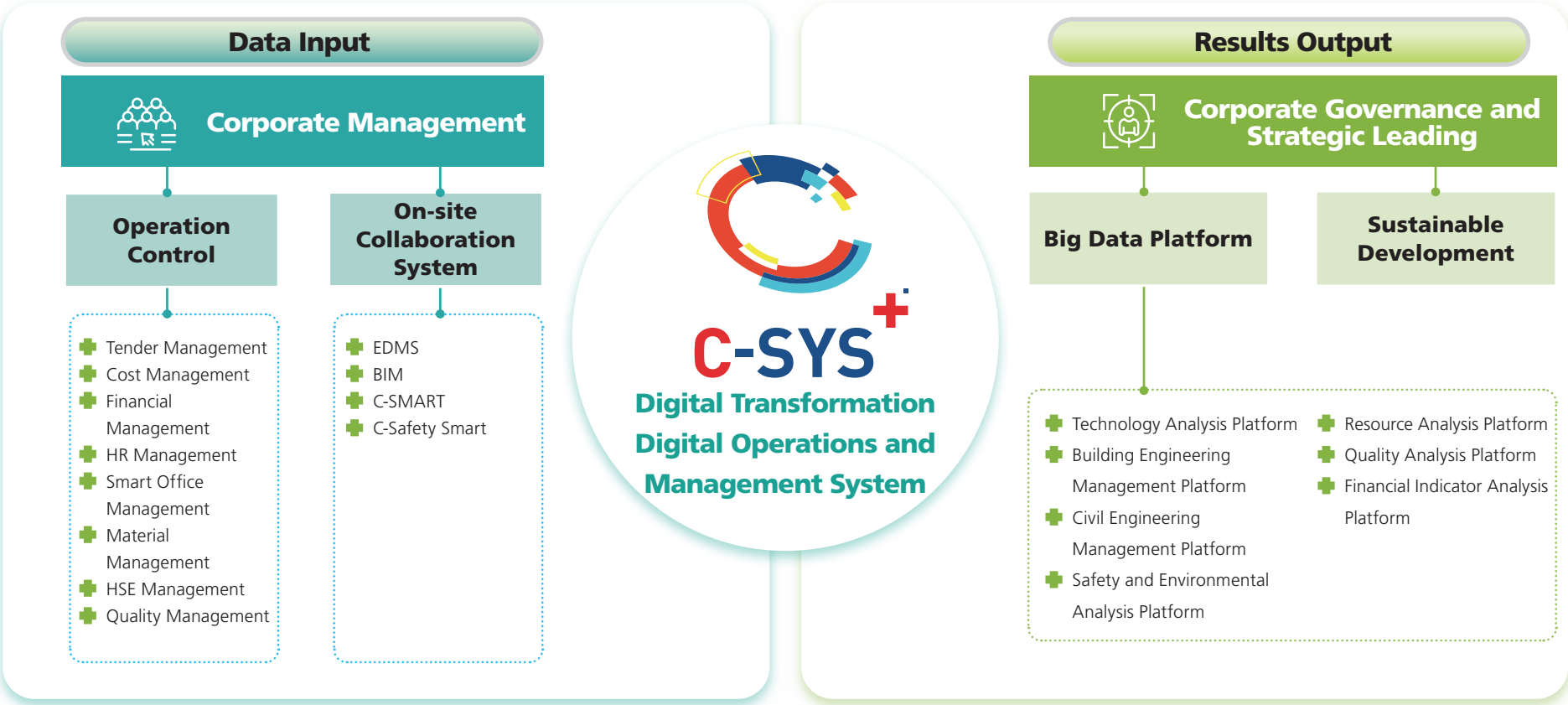
The Group actively promotes digital transformation beyond construction. The C-SYS+ system is developed by CSHK to create a digital enterprise management platform that extends the digital ecology to all aspects of operations and integrates them. The system has the following benefits:

- Integration of data resources by linking information from various departments
- Automatic collection of required external data with artificial intelligence
- Continuous collation and updating to ensure timely and accurate data
- Flexibility to adjust data presentation according to actual needs

We use technologies such as big data and artificial intelligence to extract and analyze data resources from different management systems to help us improve processes, reduce costs, increase efficiency and build multi-level and diverse solutions that facilitate internal collaboration. It has the following five goals:

1. Full-cycle online operation of construction business to improve operational efficiency
2. Continuous improvement and refinement of management based on digital systems
3. Use intelligent analysis and comprehensive data to improve business decision making with scientific information
4. Promote the research and application of technologies of construction industry and apply technological innovation into daily life
5. Connect business partners such as owners, suppliers, and subcontractors to create digital eco-synergy

Sustainability issues and policies



Our technology covers the entire process of engineering projects, allowing us to implement comprehensive digitization and achieve dynamic management and analysis, which are useful for business decision making, tenders subcontracting, risk management and other business operations. We take a holistic view of the company and integrate the requirements of different management departments to improve productivity and user experience. Systematic management of construction progress can improve site and supply chain management: for example, the online system help manage materials, e.g. concrete. It allow suppliers and the Materials Department to communicate on the platform which saves time and improve efficiency while reduces the chance of errors and omissions.

The Group uses the platform's online communication and data analysis to manage human and financial resources so as to help us speed up the approval workflow, control project costs and provide more accurate bid quotes. We also consider the needs of different stakeholders and engaged them as needed to use this technology platform to centralize data and process it in the cloud, leading the digital ecosystem transformation of the industry.

C-Smart Site

In September 2021, the C-Smart Site R&D Centre of CSHK was officially opened in the Hong Kong Science Park. C-Smart Site brings together technologies such as face recognition, IoTs, AI, and cloud computing to capture site information and automatically then aggregate it into an integrated management platform. Information analysed by the platform can assist in construction site management and decision making, and eventually realize all-around intelligent monitoring and integrated management of construction personnel, safety, environmental protection, progress and materials. Here are some examples of its functions:

Safety helmet that can automatic clock in/off: managers can know the location of personnel across all areas of the site in real time; during the epidemic, this function provides faster tracking of close contacts of confirmed persons and early cutting off of the infection chain;

Fire monitoring: conducting automatic smoke detection and fire alarm activation by AI, and enabling prompt evacuation of site personnel in the event of fire;

Material management and license plate recognition: conducting remote control of prefabricated components to enhance quality inspection and transport monitoring; only registered vehicles are allowed to enter the site area, manage access and secure site safety;

Machinery and equipment: monitoring mobile machinery, tracking path, analysing the frequency and number of use, and so on, planning resource allocation to increase operational efficiency;

Environmental and energy management: monitoring environmental parameters and environmental protection systems such as temperature, wind direction, noise and water quality on site; monitoring electrical safety with smart electric boxes instead of using diesel generators.

The Smart Site system also combines the quality management, construction measurement, engineering progress and construction robots. The Group will continue to promote the adoption of the smart site management system for construction projects, apply technological R&D results in practice, strengthen synergy and complementarity in quality technology and informatisation management, and continuously optimize the system based on previous experience to maintain the Group's leading edge in technology.

Community Involvement and Public Welfare

Businesses depend on society. To fulfil corporate responsibilities, we should give back to society, participate in the public welfare, and benefit the neighbourhood. The construction industry has a significant impact on the communities in which it operates. While investment in infrastructure has improved the lives and economies of the local population, the construction process also harms the communities nearby. It is, therefore, necessary to maintain close communication with neighbours and to consider their needs. The Group seeks to contribute its expertise and capabilities through industry development and participation in public policy in the most effective manner.

The Group values the involvement of surrounding communities in its construction projects and has developed community engagement programs before the project begins. It also sets construction hours to minimize disruption to the normal working hours of residents. Public relations officers have been assigned in some locations to proactively communicate with nearby residents, local councillors and government departments to establish good community relations through setting up community counselling hotlines and posting contact information outside the site to gather feedback and ensure timely reporting and resolution of potential problems or impacts.

In order to systematically organize community building work, the Group has set up a "CCSI Caring for the Community Volunteer Branch". It is headed by the management of the Group and CSHK and aims to serve the community professionally. The Volunteer Group aims to become a large and influential charity in Hong Kong. It is responsible for co-ordinating volunteer activities, bringing employees into contact with the community, caring for the community and building a corporate brand.

The volunteer subgroups have the "4+x" themes of "Care for the Elderly", "Contribute your Skills", "Care for Teenagers", "Care for your Home" and "Innovative Space". The first four themes are to provide elderly, the unemployed and disadvantaged groups, the youth with various types of voluntary services, such as housing repair, urban development, environmental protection, and so on.

Apart from the love and enthusiasm of volunteers, organizational support is also important in carrying out social responsibility work. By improving the organizational structure of the volunteer club and implementing work regulations and incentive mechanisms, including the participation of corporate executives, volunteer leave replacement, and the selection of outstanding volunteers, the CSCI has continued to improve management effectiveness, create a good volunteer atmosphere within the company, attract more employees and their families, customers and social groups to join the charity work, and to unite the patriotic and love forces of Hong Kong for bringing positive energy to Hong Kong society together.

Business responsibility

The enterprise is built on good business integrity. Maintaining good corporate governance and incorporating business ethics into the entire value chain is key to building a good brand reputation and ensuring a stable development of the business. Therefore, upholding integrity plays an important role in the corporate culture of the Group. The Group upholds the spirit of contract and business compliance, pursues profit in an open and healthy manner, and provides quality services to its customers.

Fighting corruption and promoting Integrity

Integrity is essential in the corporate culture and spirit of the Group. The Group is committed to upholding the highest standards of governance and ethics and combating all forms of corruption, including but not limited to bribery, extortion, fraud and money laundering. The Employee Handbook clearly sets out a code of conduct that prohibits employees from using their authority to solicit or accept benefits. To ensure expectations are raised, guidance is provided on how to handle conflicts of interest and receive hospitality. The senior management of the Group is required to sign a Letter of Integrity Responsibility and is held accountable for any corrupt practices found under its supervision.

The Group has formulated the Management Methods of Letters and Visits Matters and Clues which stipulates the channels for reporting violations of law and regulations, including letter, visit, hotline and online; the procedure of inspections and audits on the work flow and reports from the government departments, as well as the timeline and the format of the reporting. All reports will be transferred to the Group's Human Resources Department for handling and review. Where reports are being verified as substantiated, the Group will take disciplinary action based on the nature of the case, which a dismissal may be imposed for serious cases. Suspected violations will be referred to local law enforcement departments for follow-up investigation.

The Group actively implements anti-corruption practices, following its parent company, COHL. The Group organises integrity promotion activities, such as learning case studies through anti-corruption videos, and employee warning education. The Group regularly invites the Hong Kong Independent Commission Against Corruption to provide new employees with a talk on corruption prevention, with a focus on the construction industry. Even in the most difficult time of the pandemic, the Group continued to provide related training online. In order to raise awareness of anti-corruption, the Group has set up training in the Intranet to require employees to study annually from the beginning of the new year.

Laws and regulations of significance to the Group include the Criminal Law of the People's Republic of China, the Anti-Money Laundering Law of the People's Republic of China, the Prevention of Bribery Ordinance of Hong Kong and the Penal Code of Macau. During the Reporting Period, the Group had no confirmed incidents and violations related to corruption, and there were no concluded legal cases regarding corrupt practices brought against the Group or its employees.

Fair competition

The Group supports healthy competition in the industry and is committed to creating a fair competition order for its suppliers. It requires its employees to handle all business transactions based on the principles of integrity and fairness, and to avoid behaviours that could be considered anti-competitive, including bid-rigging. The Group regularly evaluates and updates its list of qualified suppliers. All suppliers are required to confirm in writing their commitment to business ethics and fair competition. The Group's internal control system regularly reviews the procedures to ensure its compliance with statutory requirements. Depending on the needs of business development, the Group will identify high-risk anti-competitive behaviours and establish relevant guidelines and procedures.

The Group complies with the laws and regulations related to anti-competition, including the Anti-Unfair Competition Law of the People's Republic of China, the Anti-Monopoly Law of the People's Republic of China and the Competition Ordinance of Hong Kong. During the Reporting Period, the Group was not involved in any litigation relating to anti-competitive conduct or monopolistic practices. It hopes to maintain an orderly and transparent market and to promote the healthy development of the industry through fair competition.

Customer privacy

The use of information technology in business operation continues to grow. While remote working and meeting have become the norm during the pandemic, the risk of information leakage has increased accordingly. The Group has developed an information security management system in accordance with ISO 27001, which specifies a prudent approach to collect, process, store and use information. Meanwhile, it continuously tests and updates information system infrastructure and security measures. These actions support the development and application of the Group's innovative technologies, as well as protecting the privacy of customers, business partners and employees.

The Group tests the security of its information systems with cyberattack simulation. The Group also provides appropriate training and support to its employees and responds to the national cybersecurity education campaign in the hope to raise employees' information security awareness to meet the challenges posed by changing work patterns.

The Group complies with relevant laws and regulations, such as the Cybersecurity Law of the People's Republic of China and the Personal Data (Privacy) Ordinance of Hong Kong. During the Reporting Period, the Group did not receive any substantiated complaints about infringement of customers' privacy or loss of customers' data.

Protection of intellectual property rights

Beyond tangible investments, there are many intangible assets, such as patents and technologies, involved in the completion of a construction project and the creation of a physical building. The brand names of the Group and its business partners, the design concepts of buildings, the engineering plans, the innovative construction techniques, the research and development of new construction materials and the application of technology in the construction industry are all creative and intellectual achievements of many people. The Group respects intellectual property rights. It protects its interests by applying for patents in a timely manner, while stipulating in the Employee Handbook that employees are not allowed to use the ideas and products of others without permission. The Group has formulated its Rules for Intellectual Property Management and reviewed the implementation in accordance with the provisions.

Regional Sustainability Performances and Case Studies

Regional Sustainability Performances and Case Studies

Hong Kong

Key Performance

Economic performance	Revenue	23,844 million HKD
Social performance	Total number of employees	5,409 persons
	Monthly paid employees turnover rate	28%
	Work-related injuries	6.0/1,000 workers
	Average training hours of monthly paid employees	7.6 hour/person
Environmental performance	Greenhouse gas emissions intensity	4.4 tonnes CO_2-e/million HKD
	Non-hazardous waste intensity	47.2 tonnes/million HKD
	Energy intensity	12.4 MWh/million HKD
	Water intensity	64.8 m^3/million HKD

The Group constructed a number of emergency isolation facilities in Hong Kong

China State Construction Engineering (Hong Kong) Limited ("CSHK") has been established in Hong Kong for more than 40 years and is a leading contractor in the industry. In the first two years of the COVID-19 pandemic outbreak, the Group participated in the construction of the Lei Yue Mun Prevention and Quarantine Centre, the Penny's Bay Quarantine Centre, the community treatment facility expansion at AsiaWorld Expo and the North Lantau Hospital Hong Kong Infection Control Centre ("HKICC"). Each project was completed in days and even in hours. The Group has been commended by the HKSAR Government in public and has been regarded as the most reliable partner in the Government's fight against the pandemic.

In early 2022 when the fifth wave of the COVID-19 pandemic occurred, Hong Kong encountered the most severe challenge in recent two years, and the existing isolation and treatment facilities were inadequate. With the support of the Central People's Government, the Group has once again assumed an important task, believing that "Together, we fight the virus" and "time is life". Based on its project experience , the Group managed to build up the project at a rapid pace and continue to contribute to the community Hong Kong community.

Project Description

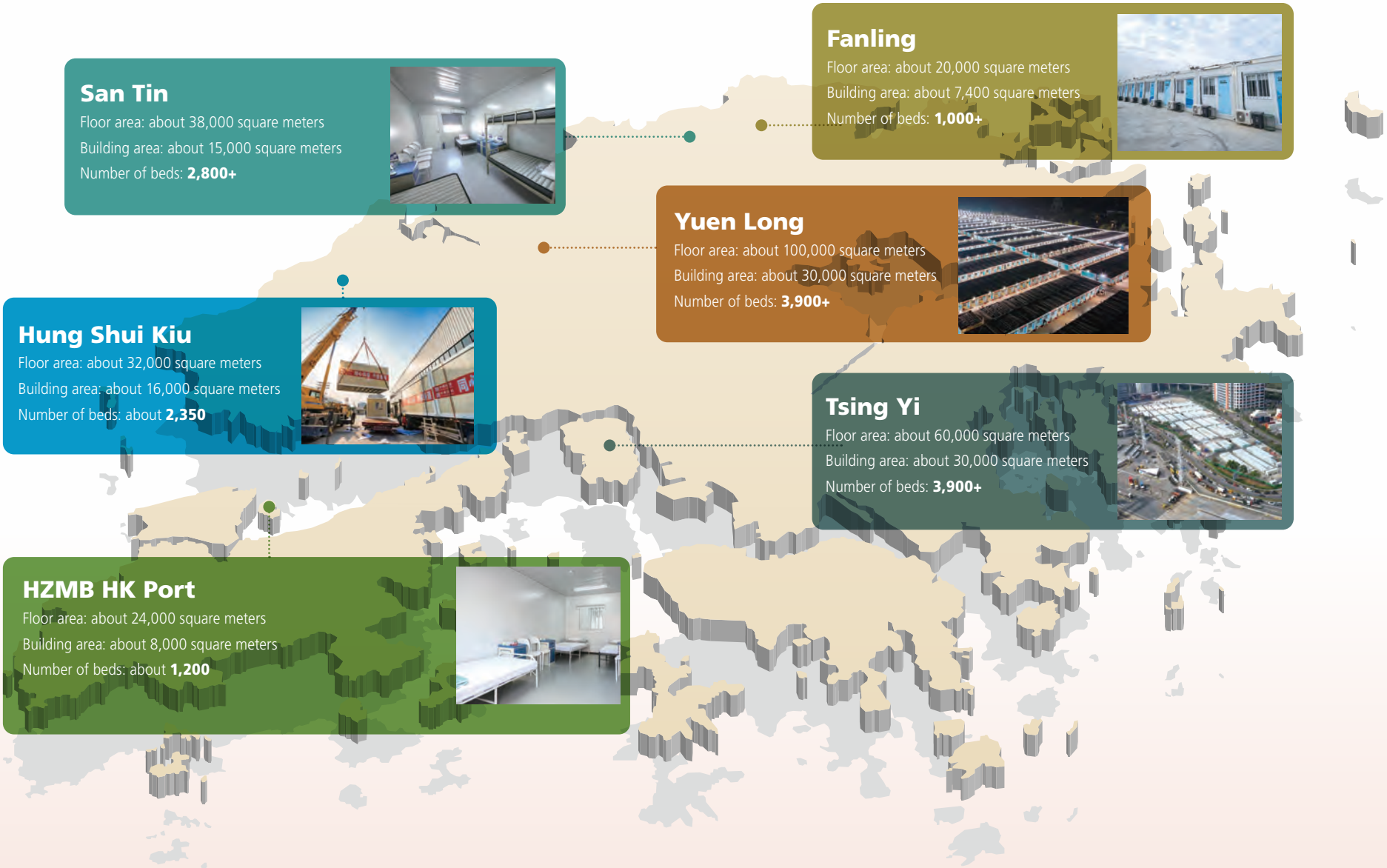
These facilities are divided into two categories. The first batch of these facilities is the six community isolation facilities ("makeshift hospitals"), which are located in Tsing Yi, San Tin, Fanling, Hung Shui Kiu, Yuen Long and Hong Kong-Zhuhai-Macao Bridge (HZMB) Hong Kong (HK) Port. Six projects provide a total of 20,916 isolation beds. The process of levelling the site, arranging houses, installing electrical and mechanical equipment, and arranging furniture. It took only eight days for the Tsing Yi isolation facilities to be delivered. Apart from the larger scale of the Yuen Long project, the original land was mainly swamps and grass. In the early days of the project, heavy rain had increased the difficulty of dealing with soft foundations.

The engineering timings of the six projects are as follows:

Date	Progress of the project
February 22	Works on Tsing Yi, San Tin, Hung Shui Kiu and Yuen long projects commenced
February 23	Construction of Fanling and HZMB HK Port project commenced
February 24	The Tsing Yi project has completed the site levelling and hardening
February 27	The Tsing Yi project has completed the house rehearsing
February 28	The Tsing Yi project has completed the installation of the machine
March 1	The Tsing Yi project was handover and patients were admitted on the same day
March 7	The largest Yuen Long project completed site levelling and hardening
March 9	San Tin project handover; HZMB HK Port, Fanling and Hung Shui Kiu project completed the housing allocation
March 12	HZMB HK Port project handover
13 March	Fanling project handover
17 March	Hung Shui Kiu project handover
24 March	Handover of the last Yuen Long project

Regional Sustainability Performances and Case Studies

The construction scale of the six projects is set out in the following table:



Regional Sustainability Performances and Case Studies

The second batch of projects is isolation facilities built with MiC units, located at the Kai Tak Cruise Terminal and Penny's Bay. The total construction area is about 386,000 square meters and more than 20,000 beds are designed. The projects include negative pressure wards, which are designed to consider various infection control standards and requirements such as cleansing zoning, drainage, sewage and exhaust gas. Each of the two projects is divided into several areas, with a separate water supply and auxiliary facilities such as medical, office and storage, which will be delivered in stages. It also ensures safe and convenient follow-up use.

The Penny's Bay isolation facility is of the largest scale among all projects, divided into six zones and consisted of two storeys, designed, constructed and inspected in strict accordance with Hong Kong's permanent building standards. In merely two months, the first phase of the project was completed and delivered on 19 April, comprising 2,000 beds in over 1,000 rooms.

The design of the two projects has also taken into account their use during and after the epidemic. They include single and family rooms that can be used as isolation and quarantine facilities during the outbreak period, and can be converted into transitional housing with only minor adjustments, either on-site or relocated. They can solve the housing problem of over 20,000 people.

Overcoming difficulties

The Group urgently built several projects during the pandemic under difficulties but worked tirelessly to overcome them. The Group has established a high-level command office. Yan Jianguo The Chairman of COHL and the Chairman of the Group's Board of Directors served as the commander-in-chief. Over 60% of the senior management participated in these projects. The Group has established a coordination and communication channel with the government and relevant departments to establish the construction standard of temporary housing units. It has also modified and renovated facilities according to Hong Kong's daily habits, such as changing squat toilets to toilets, etc., to improve the user experience. As a temporary facility, these housing units require more frequent maintenance. The Group has coordinated the necessary personnel, materials, equipment, etc. for various projects and maintained communication with the team from China Overseas Property Holdings Limited for the management of the housing units, and provided 24-hour fast professional services.

The command centre also coordinates the procurement of materials and logistics for eight projects. Due to time constraints, the procurement team is directly connected with the design team, ready to adjust and make early purchases and early arrivals as soon as possible. The Group utilizes an accumulated supplier and supply chain resources list to screen fast and reliable suppliers, where most purchases were procured. The Group also set up a central warehouse to coordinate control and dispatch of multiple warehouses to ensure a sufficient supply of items.

Transport is a major obstacle during the construction of this emergency project because of the disruption of people flow and the obstruction of land transport caused by the pandemic outbreak. With the support of the Central authorities and the HKSAR Government, the Group safeguarded the logistics system and coordinated the use of sea and railway transport. Nearly 7,800 boxes were shipped in less than 20 days. The Kai Tak and Penny's Bay projects are also conveniently located for sea transport to help relieve the pressure on transportation.

Based on the C-Smart material management system, the Group established an intelligent traffic control system together with teams from universities to enhance the logistics efficiency of projects in the Kai Tak and Penny's Bay. The solution covers the entire logistics — from the production factory to the arrival to the wharf, to the transfer point and to the construction site.

Health protection

As construction was during the peak of the pandemic, the Group has established a guidance and enforcement system to safeguard the site environment and the health of the engineering staff. The Group's parent company, the China State Construction Engineering Corporate, dispatched a pandemic prevention steering group, which is tasked to arrange doctors and experts to carry out preventive inspection and rectification. The steering group has previously travelled to several overseas countries, including Egypt and Georgia, to guide the prevention of disease in the overseas projects of the China State Construction Engineering Corporate Group, and has extensive and practical experience in the prevention of disease in construction projects.

The Group has assigned the head of the disease prevention department at the construction site, implementing the duty of prevention, such as carrying out measures for personnel, entry and exit of the construction site, and preventing a breakout on site. In doing so, the risk of infection was reduced by limiting the number of people working at the same time on the same site. We have also introduced new technological products to assist in the prevention of an outbreak, such as setting up an electronic health declaration platform to facilitate management personnel, spraying nano-coatings in the construction site office, and deploying air purifiers with a high-efficiency air particle screening program (HEPA) or oxygen polymerization air treatment technology, etc.

Caring workers

Eight projects operate on a 24-hour shift basis. Even though the technology was used to reduce field operations, it will still require a significant amount of staff to complete in the shortest time possible. Apart from outbreak prevention, we are also fully concerned about the general health of our staff. The Group has set up a "happy hour Station" at the construction site to provide workers with three meals a day, afternoon tea and late-night snacks, rest facilities, first aid supplies, etc., and provide them with daily consultation and help services. As of late March, we have distributed nearly 300,000 food and beverage, 250,000 medical masks and 150,000 virus quick-detection kits while providing health consultation to our thousands of site workers.

The Group also provides various welfare benefits, such as transport allowance, pandemic prevention allowance, a maintenance allowance for infected areas, etc., depending on the circumstances of each project. We adhere to the principle of timely payment and accurate distribution. We care for and show importance to our workers by trying out our best to make them worry-free, inspire their enthusiasm and vigour, and work together to strive for the goal of completing the construction.

Support from the Central leadership

The Group is on the first line of the pandemic and plays a pioneering role in fighting the disease. However, it is also important to note that the success of the pandemic prevention also depended upon the leadership and support of the Central Government's authorities and other related parties. Following the instructions given by President Xi Jinping to the HKSAR Government's pandemic prevention group, the Central Government and the State Council are fully committed to assisting the HKSAR Government to combat the pandemic. As such, the Hong Kong and Macao Affairs Office chaired the coordination work. The Mainland has also set up a special program to support Hong Kong's pandemic prevention work. It has helped set up a construction team for isolation and quarantine facilities to mobilize materials from all parts of the country and organize materials for production and preparation urgently. The shipping companies and other processes are followed up at various approval nodes, warehouses, ports and so on to ensure that the products arrive in Hong Kong in the shortest possible time. The State Council's State-owned Assets Supervision and Administration Commission ("SASAC") is also coordinating with personnel, materials, venues and other parties to arrange transportation channels, container yards, etc., and to ensure that the production and supply of goods are not affected by pandemic prevention.

In Hong Kong, the HKSAR Government, the China Liaison Office and the Group set up a tripartite liaison mechanism, which provides high-level communication and coordination, Each duty was assigned to specialized personnel. The construction was operating on a 24-hour basis. While the departments of the HKSAR Government, including the Chief Secretary for Administration, and Security Bureau focused on their responsibilities and achieved solutions, the Civil Engineering and Development Department, Architectural Services Department and other public works departments were in charge of facilitating the construction of various projects at unprecedented speeds through strengthened collaborative work.

CSHK's annual environmental protection target

Based on the Guidelines for the Calculation of Environmental Indicators and the procedures for the Control of Materials Shrink, CSHK has set environmental indicators and targets according to the nature of operations at the construction site, and set resource conservation targets for the Hong Kong Headquarters, which will be reviewed and approved by the Group's General Management Committee.

CSHK, Construction sites and offices 2022 Environmental and Energy Management metrics:

Environmental management metrics	Environmental Management Indicators in 2021	Environmental Management Indicators in 2022
Reduce wood use on site	Less than 128 cubic meters/100 million HKD turnover	Less than 125 cubic meters/100 million HKD turnover
Reduce paper use on site	Less than 350 packs of equivalent A4 paper/ 100 million HKD turnover	Less than 345 packs of equivalent A4 paper/ 100 million HKD turnover
Water saving on site	Less than 57 thousand/100 million HKD turnover in general construction site Less than 620 thousand/100 million HKD turnover in pile grinding site	Less than 56 thousand/100 million HKD turnover in general construction site Less than 610 thousand/100 million HKD turnover in pile grinding site
Electricity saving on site	Less than 210 thousand/100 million HKD turnover	Less than 205 thousand/100 million HKD turnover
Reduce concrete loss	Less than 1.5% in general construction site Less than 5.5% in pile grinding site	Less than 1.5% in general construction site Less than 5.5% in pile grinding site
Reduce rebar loss	Housing sites below 3.8% Civil work sites below 2.3% Base site is below 3.3%	Housing sites below 3.8% Civil work sites below 2.3% Base site is below 3.3%

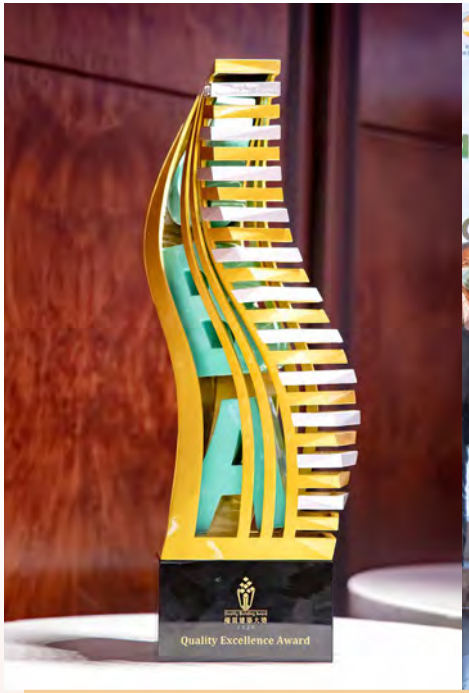
Environmental management metrics	Environmental Management Indicators in 2021	Environmental Management Indicators in 2022
Save electricity in the office	Annual electricity consumption per square meter decreased by 1.0% (i.e. <114kWh/m^2) compared to 2020	Annual electricity consumption per square meter decreased by 1.0% (i.e. <113kWh/m^2) compared to 2021
Save paper in the office	3% less than the average total paper used in 2018–2020	3% less than the average total paper used in 2019–2021
Recycle the computer and its equipment	Recycle all computers Recycle all monitors Recycle all hard drives and other accessories Recycle all printer cartridges	Recycle all computers Recycle all monitors Recycle all hard drives and other accessories Recycle all printer cartridges
Waste paper recycling	Recycle all waste or old paper	Recycle all waste or old paper

Environmental management metrics	Energy Management Indicators in 2021	Energy Management Indicators in 2022
Total office saves power	Annual electricity consumption per square meter is 1.0% less than 2020 (i.e. <114kWh/m^2)	Annual electricity consumption per square meter is 1.0% less than 2021 (i.e. <113kWh/m^2)
Continuous improvement of the energy performance indicator (EnPI) for construction work	2.0% improvement in energy performance indicators (EnPI)	2.0% improvement in energy performance indicators (EnPI)
Get the latest information on energy-efficient products	Visit the annual International Environmental Expo Share the latest energy-saving product information	Visit the annual International Environmental Expo Share the latest energy-saving product information
Use energy-saving lighting products	Use T5 or LED light pipes in newly built site offices	Use T5 or LED light pipes in newly built site offices

High-Quality building reputation in Hong Kong

In June 2021, the biennial Hong Kong "Quality Building Awards 2020" awards ceremony was hosted by nine authoritative organizations in the Hong Kong construction industry. The Hong Kong Children's Hospital Project, designed and built by the CSHK, won two awards, including the "Excellence Quality Award" and the "Hong Kong Non-Residential Project Quality Building Award" due to its superb design and outstanding building quality.

The QBA aims to give public recognition to quality architectural projects as well as teams with excellent teamwork spirits in the construction industry. Each entry is required to demonstrate quality building standards following six criteria, including vision and teamwork, design and innovation, construction, project cost and budget, environmental considerations and user experience.



Regional Sustainability Performances and Case Studies

In December 2021, the Hong Kong Construction Industry Council Outstanding Contractor Award Presentation Ceremony was held at Government House. The award recognizes the achievements of contractors in promoting innovation, nurturing professionalism, revitalizing and upholding corporate governance in their day-to-day operations and their contribution to the industry and the community. The awards are divided into three categories: large-scale contractors, contractors, and professional contractors. The contractors are evaluated from multiple dimensions, including corporate innovation, specialization, youth, environment, society, and governance. The award is one of the most influential construction industry awards in Hong Kong, and is known as the "Oscar" of the construction industry in Hong Kong.

To prosper Hong Kong in serving the community

Since its official establishment in June 2019, the CSCI "Caring for the Community" Volunteer Branch (the "Volunteer Branch") has now more than 2,100 volunteers, including 95% of Hong Kong employees, who have contributed to leading Chinese-funded enterprises in Hong Kong. We have a representative brand event, such as "1,000 Households Repair & Renovation Scheme " and "Junior Engineer Workshop", which are designed to complement the Group's professional expertise.

A group of enthusiastic and dedicated professional staff formed a "House Maintenance" team to install anti-slip handrails, check water pipes, clean air barriers, etc. for those in need, including grass-root families with difficulties, "tenants of subdivided flats" and singleton elderly. Since the launch of the program, we have received additional referrals from Legislative Council members, District Councillors and district organisations for those in need. These seemingly simple repairs are actually long-term problems, and have been remained as an unsolvable problem for those in need. Such problems have affected their home safety and quality of life for a very long time. Therefore, we have expanded our target to "1,000 Households Repair & Renovation", leveraging the Group's advantages in construction and engineering, and become one of the COHL's targets during the 14th Five-Year Plan period "Four One-Thousands". During the Reporting Period, we invited a number of senior government officials, Legislative Councilors, community organizations and public welfare organizations to participate in the series. We have received compliments and appreciation from the community for our rapid and high-quality assistance to those in need. In total throughout the year, we have repaired nearly 500 homes in Hong Kong, with more than 1,500 hours of service.

Regional Sustainability Performances and Case Studies

In June 2021, we organized the "The constructor for the future of Hong Kong — Junior Engineer Workshop", which invited 110 students from Hong Kong secondary schools to visit and exchange views on the Hong Kong Palace Museum Project, and to learn about building technology such as BIM and smart construction sites. The event has enhanced the understanding of the traditional Chinese culture among young people and to stimulate their interest in construction engineering and technology.

In addition to the two brand activities, we have also provided volunteering activities, such as tutoring students from grassroot families, the "Wind under the Wings" mentor-matching programme, "Charity Walk", and donating food and epidemic prevention supplies to those in need.

In 2021, the Group became one of the first Chinese enterprise to receive the "Hong Kong Volunteer Award — Corporate Award " from the Hong Kong Agency for Volunteer Service and was awarded by the Chief Secretary for Administration of the HKSAR Government. Since 2005, the Hong Kong Agency for Volunteer Service, a non-profit-making charity, has held the "Hong Kong Volunteer Award" selection event every two years, which is a very representative volunteer honor in Hong Kong. Among them, the Corporate Awards Group B is a group of more than 100 employees. So far, only about a dozen enterprises have been awarded, all are leading enterprises in respective industries.

Macau Region

Key Performance

Economic performance	Revenue	8,405 million HKD
Social performance	Total number of employees	1,165
	Monthly paid employees turnover rate	5%
	Work-related injuries	0.7/1,000 workers
	Average training hours of monthly paid employees	5.3 hour/person
Environmental performance	Greenhouse gas emissions intensity	2.4 tonnes CO2-e/million HKD
	Non-hazardous waste intensity	37.5 tonnes/million HKD
	Energy intensity	5.6 MWh/million HKD
	Water intensity	107.3 m^3/million HKD

The year 2021 marks the 40th anniversary of the establishment of China Construction Engineering (Macau) Company Limited ("CCE Macau"). The company held a commemorative event on the theme of "Prosperity of Macau, Service to society; Leading the Trend, Strive for Excellence". Over the past 40 years, CCE Macau has demonstrated its role as a central enterprise by contributing to urban construction, serving the people's livelihood, and integrating itself into the overall situation of national development.

CCE Macau is committed to promoting the economic development and safeguarding local employment in Macau. It has been working with about one third of Macau's local construction enterprises for a long time and subcontracts the vast majority of the projects to local small and medium-sized construction enterprises, providing jobs for about one fourth of Macau's local construction workers.


Macau New Neighborhood project in Hengqin

With the guidance of the national development strategy, Macau has joined in the development of the Guangdong-Hong Kong-Macau Greater Bay Area. CCE Macau has actively assisted in the construction of the Hengqin Guangdong-Macau deep cooperation zone through basing itself in Hengqin, extending to the Bay Area, exploring and promoting the "transferring Macau standards to Mainland", and has become one of the first enterprises in China to undertake projects in Mainland China with the qualifications of Hong Kong and Macau. CCE Macau built the "Macau Engineering Model", the first pilot project in Mainland China and implemented the Macau Building Engineering Management Model, which directly drove professionals from the construction industry in Hong Kong and Macau to practice in Hengqin. As at the end of 2021, CCE Macau has invested in 10 projects in the Greater Bay Area market in Mainland China.

The Macau New Neighbourhood project in Hengqin, constructed by CCE Macau, is the first "Macau Community" built by the Macau SAR Government in the Mainland China. It is an important initiative of the Central Government to support Macau's participation in the construction of the Guangdong-Hong Kong-Macau Greater Bay Area and its integration into the overall development of the country. CCE Macau formulated "Hundreds of People Across the River Project", the first batch of eight Macau residents have already moved into the new neighbourhood project and have actively participated in the construction of the Greater Bay area. The project continues to adopt the Macau model, introducing the advantages and cultural concepts of Macau's engineering management, and promoting the " transferring Macau standards to Mainland".

The project has a total gross floor area of approximately 620,000 square meters, and will integrate residential, educational, medical, community services and elderly care functions to provide approximately 4,287 fully renovated houses and about 200 rent-only talent houses for Macau residents. Of these, Lot Two (2,035 fully renovated houses and about 100 rent-only talent houses) and Lot Three kindergarten and elementary school projects will be constructed by CCE Macau. The project is the first in China to be built through cooperation between the Mainland China and the Macau SAR Government; the first in China to offer a project site to Macau by agreement; and the first in China to have the Macau SAR Government entrust a public organization to lead the construction and operation of the project.

The project is livelihood-oriented and based on an innovative social governance and service model, to build a new home for Macau residents to live and work with pleasant ecology, perfect services and convenient travel, and provide Macau residents with comfortable living space and supporting Macau's better integration into the overall development of the country. In September 2021, Han Zheng, member of the Standing Committee of the Political Bureau of the CPC Central Committee and Vice-Premier of the State Council, visited the project site and gave a high praise. The project is now progressing smoothly and is expected to be completed in April 2023.

Love for Macau

Adhering to the spirit of serving the society and caring for people's livelihood, CCE Macau has organized a series of "I do practical things for the masses" activities. A total of 50 volunteers participated in the public welfare visit themed "Care for the Community and Ensure Secure Livelihoods", which was organized by the Macau Volunteer Team in collaboration with the Fuhong Society of Macau and the Women's General Association of Macau. They asked after the elderly who live alone and helped repair their homes, their act has been widely praised. Sophia Loi, Deputy General Manager of CCE Macau, Wong Kit Cheng, and Ma Io Fong, members of the Legislative Assembly of Macau participated in the event.

Mainland China

Key Performance

Economic performance	Revenue	40,529 million HKD
Social performance	Total number of employees	3,233 persons
	Monthly paid employees turnover rate	16%
	Work-related injuries	0.4/1,000 workers
	Average training hours of monthly paid employees	22.6 hour/person
Environmental performance	Greenhouse gas emissions intensity	2.5 tonnes CO2-e/million HKD
	Non-hazardous waste intensity	36.6 tonnes/million HKD
	Energy intensity	4.3 MWh/million HKD
	Water intensity	74.7 m3/million HKD

Shenzhen Baguang International Hotel

Shenzhen International Hotel is a major epidemic prevention project in Shenzhen, aiming at reducing the risks of foreign epidemic import into the community through centralized epidemic prevention and isolation. The Baguang Site project, constructed by the Group achieved the following five first steps:

- The first seven-story MiC permanent building project in the Mainland China
- The first integrated permanent anti-epidemic hotel project in China
- The first project in China to receive a full score according to the "Shenzhen Municipal Assembled Building Scoring Rules"
- The first enterprise in China to use digital RMB for construction projects
- A multy-story hotel with the highest construction speed, with the first two multi-story buildings built in 44 days

Project Description

The project has a total gross floor area of over 250,000 square meters, including seven 7-story, five 18-story hotels or hostels, and ancillary facilities such as medical waste disposal and sewage treatment facilities. During the period of epidemic, the project can accommodate 3,800 people for quarantine and 600 staff. The project has also been designed to be converted into a permanent dormitory for Ocean University students after the end of the epidemic.

The Group had previously built a prototype building on a trial basis at its prefabricated construction factory in Zhuhai. It had achieved a breakthrough from foundation pouring to topping out of the 7-story main construction, while meeting the requirements of rapid construction, hotel standards, and quarantine in 12 days. This greatly strengthened the Shenzhen Municipal Government's confidence in the construction of the Group's projects.

The project is a multi-story steel-frame assembly building, which is delivered with finishing touches and ready for move-in. Together with the support of COHL, the Group has successfully overcome the following difficulties:

- The construction task was heavy and the contract period was tight, with the shortest part completed in only 44 days and the whole project completed in 136 days.
- During the construction period, two tropical cyclones and a strong monsoon attacked the project, which affected the construction progress. The Group had arranged emergency evacuation for more than 5,000 people, and some were transferred to resettlement sites with adequate bedding and medicines supply.
- The demand for materials was huge and complex, and the supply period was short. The Group took advantage of the whole industrial chain and used all the production capacity of its own factories for prefabricated construction components and glass curtain walls to prioritize the supply.
- The geological environment was complex, requiring the removal of graves, silt removal and backfilling, and the design requirements and schedule were changed several times due to actual conditions.
- The demand for workers rose and plummeted, and the work intensity was high, requiring 24-hour shifts and making it difficult to find new workers.
- The traffic roads on site were narrow and some sites had only one mountain road for access, so we had to lay out buildings, access roads, temporary storage sites, and so on, at the same time in a dense site. We developed a three-level dispatch plan from the factory to the unloading point, implemented smart traffic organization and precise transportation dispatch plan, and performed admission and positioning management at the diversion nodes.
- The site was crowded with many people and was highly mobile, with a wide range of sources, making epidemic prevention difficult. The epidemic prevention director of the Hong Kong Temporary Hospital project was assigned to take up the important role again, to establish a comprehensive anti-epidemic system and strictly enforce the epidemic control measures in Shenzhen so as to achieve a record of zero new infections in the project.

The Group has successfully passed the test of this project and has achieved the following significant results:

1. **Recognition from the government and CSCEC:** Our ability to fulfil the contract by focusing on a number of advanced technologies was recognized by many leaders and public departments of the Shenzhen Municipal Government from the mayor on down. The Chairman and Vice President of CSCEC also attached great importance to the project, visited the site for guidance and gave high praise.
2. **Establishing management system and team:** the project adopted the advanced integrated project management team (IPMT). More than 1,000 managers from various platforms have been deployed to participate in the project, establishing a management system to adapt to the rapid construction projects and creating a team that was willing to take on challenges and overcome difficulties. This differentiation highlights the strengths of the Group's main contractor business, both in terms of organizational structure and team building.
3. **Connection with suppliers and workers:** China Overseas Construction Limited has not undertaken main construction projects in Shenzhen for many years. After this project, we already have over 300 material suppliers and subcontractors. For some key trades, we know the workers' teams directly. Thanks to the Group's in-depth survey of the workers' living areas, we are aware of their needs and have gained the recognition of some skilled workers. These favourable conditions will certainly help the Group to expand its construction business in Shenzhen and the Greater Bay Area in the future.

Reorganisation and Expansion of Shenzhen Shekou Hospital

The project is a complex tower for internal medicine of Shekou Hospital, which locates in the center of Shekou, Nanshan District, with a total gross floor area of 92,100 square meters and approximately 450 new beds. There is an increasing demand for quality medical resources in the Shekou Free Trade Zone and an urgent need to expand medical resources to meet public demand. This project is the Group's first government project in the Qianhai Shenzhen-Hong Kong Modern Service Industry Cooperation Zone. In addition to the application of BIM and smart site, the Group also tried to apply digital yuan to pay wages and promote the technology of the construction industry. The project demonstrates the Group's ability to integrate the resources in Greater Bay Area as a state-owned central enterprise headquartered in Hong Kong. CSHK controls the project internally and implements the Group's strategic policy of "transfer of Hong Kong standards to Mainland", while China Overseas Construction Limited is responsible for the coordination with local government departments and regulatory bodies and integration of nearby resources, and active participation in the development and construction of Shenzhen-Hong Kong cooperation in Qianhai.

China State Construction Hailong launched a "Summer cool" campaign

Warm Hailong

The China State Construction Hailong Technology Company Limited ("China State Construction Hailong") has carried out its social responsibility as a central enterprise through the "Happiness and Warm Hailong" project, which aims at improving workers' quality and ability. Ten types of services have been launched under this project, including legal consultation service, free medical checkup, suggestion box, skill training, cultural and sports activities, birthday party for workers, care and sympathy for workers in difficulties, and logistic protection for overtime workers. The project has benefited more than 1,000 workers and is a model of COHL's mission of "creating happiness" on the front line. The Group's vision is closely linked with the workers' career prospects, namely creating value for employees and expanding the scope of happiness. The new look of the workers reflects the effectiveness of the Group's technological transformation and the new era of the industrial workers' group.

Yellow River Intangible Cultural Heritage Project

CSCIICL Henan invested in the construction of the Yellow River Basin Intangible Cultural Heritage Protection Exhibition Center in Luoyang City ("Yellow River Intangible Heritage Project"). The project is located at the southeast side of the intersection of the ancient city expressway and Longmen Avenue in Luoyang City, across the road from the Dingding Gate Site Museum, and is a key project at both provincial and municipal level. It is designed and built with the core objective of passing on the intangible cultural heritage of the Yellow River Basin. The project includes the Intangible Cultural Heritage (ICH) Exhibition Hall, ICH Book City, ICH Academic Exchange Center, ICH Ancient Street, and so on. The total construction area is about 180,000 square meters, integrating the functions of collection of treasures, display and exhibition, education and research, interactive experience, public service and creative industry.

The project greatly invested in civilized construction, energy-saving and environmental protection, and standardized, refined and standardized project management. Since the start of construction, we have always insisted on the safety production policy of "safety first, prevention first, comprehensive management" and managed the production safety with the goal of "national level safety and standard construction site". It obtained two patents of new practical models, one provincial work method and one paper published in national journals, which laid a solid brand foundation for promoting the high-quality development of the enterprise.

As a model for the protection of intangible cultural heritage in the Yellow River Basin, the Yellow River intangible cultural heritage project has received widespread attention from leaders at all levels. The project is expected to be completed and opened in 2022. It will seize the opportunity of the ecological protection of the Yellow River Basin in Luoyang and the national strategy of high quality development, inherit and promote the Yellow River culture, closely follow the plan of "three cities, three hundred miles, three thousand years" launched by Henan Province, explore the contemporary value of the Yellow River culture, continue the historical lineage, assert cultural self-confidence, and inject a new culture for the realization of the great rejuvenation of the Chinese nation.

Expressways in Guizhou

Over the past few years, CSCIICL Guizhou has invested in the construction of the Dejiang-Xishui Expressway (Zheng'an-Xishui Section) and the Xiushan-Yinjiang Expressway (Guizhou Section), which were open to traffic in July and August 2021 respectively. The 130-kilometer Zhengxi Expressway is the "first horizontal expressway" of the network in Guizhou Province. The 53-kilometer Xiuyin Expressway connects northeast Guizhou to Chongqing.

The construction and operation of both projects has given a great impetus to the local economy, including the employment of local personnel in management, construction and logistic positions. The project personnel have driven local industry, commerce and consumption. Demand for building materials, transportation and energy has also broadened local development opportunities, while supportive infrastructure and housing of projects has also improved the lives of local residents.

Zhengxi Expressway has 25 tunnels, among which 3 are extra-long and 4 are high gas tunnels. It was built in complex geological conditions so the construction was difficult. The Taozi Ya Tunnel, known as "The Museum of Tunnel Geology" is also a part of Zhengxi Expressway. The Zhengxi Expressway was selected from nearly 200 projects worldwide to receive the "New Civil Engineer (NCE) Tunnelling Project of the Year" award from the Institution of Civil Engineers (ICE) of United Kingdom. This award assesses projects from customer satisfaction, innovative design and construction technology, team building, energy saving and environmental protection, and other dimensions. It is the second project in Mainland China to receive this international award after the Island and Tunnel Project of Hong Kong-Zhuhai-Macao Bridge.

Xiuyin Expressway will be a new way to visit the World Natural Heritage and National 5A scenic area in Fanjingshan Mountain. The project's tunnel entrance is decorated with murals featuring local tourism resources, minority cultures and calligraphy. Murals express cultural and regional characteristics so Xiuyin Expressway has become "the most beautiful highway in Guizhou". It promotes the tourism development of Yinjiang and helps export local tea, fruits and herbs.

The two expressway are beneficial to local agricultural and industrial development, investment attraction, cultural tourism, and so on. Expressways break the block of mountains, link up industries along the way, boost the economy of Guizhou, help the integration of Sichuan, Guizhou and Chongqing, and consolidate the achievements of poverty elimination. They will ensure a well-off society and lay a solid foundation for prosperity and happiness of the people.

Zhengxi Expressway

Xiuyin Expressway

Rural Vitalization and Targeted Poverty Alleviation

The Group and CSCIICL have supported rural villages and households in need through a number of measures:

Education support

China Overseas Charity Foundation donated the 15th Hope School, China Overseas Wenjiahe Hope Primary School, on behalf of COHL and its subsidiaries in 2021. CSCIICL donated project capital of RMB 500,000 and an additional RMB 200,000 for teaching facilities of the library, teachers' rest area and science and innovation centre.

Industry and tourism support

After the delivery of the above-mentioned Hope Primary School, CSCIICL Shaanxi sent staff to inspect the use of the site, investigated local industries, and organized two tourism supportive activities. The other branches also promoted the tourism resources and broadened the sales channels of agricultural products in three counties of Gansu by promotion and exhibition.

Consumption support

In light of the sales of agricultural products in Gansu and four counties in Fujian, CSCIICL and its subsidiaries purchased local produce to support rural economy and the amount exceeded the target. CSCIICL Hunan set up a special display area in CSC's Smart Valley exhibition hall, an industrial project operated by the company. This helps the Shibadong village sell its agricultural products. CSCIICL Hunan purchased mineral water, meat and rice for a long-term to support the village in realising its vision of "building the most beautiful village in China".

Hope Hut

CSCIICL Shandong visited and served children in need. Based on the original housing, we designed independent learning and living space then equipped them with necessary furniture and other basic supplies to improve the children's living environment. During the Reporting Period, we participated in the construction of 50 "Hope Hut" to brighten the dreams of poor children. Meanwhile, our volunteers are paired with children to provide long-term counseling and services in life and learning so as to help them grow up healthily.

Award won by China Overseas Construction

The project of RongXi Garden, constructed by China Overseas Construction Limited, won 6 awards including "Excellent Team" and "Excellent Project Manager" in the "Qianhai Craftsman" activity held by Shenzhen Qianhai Administration in 2021. The project performed well in all aspects like construction progress, quality, safety and epidemic prevention. The main structure was successfully topped out according to the schedule, which was highly praised by the owner.

About this Report

The Group recognises the importance of sustainable development and is committed to embedding the concept in its daily operations. The Group engages with stakeholders and publishes Sustainability Reports annually to disclose its progress and performance. The 2021 Sustainability Report (this "Report") outlines the Group's commitments and achievements in sustainable development and its management approach, policies, and initiatives in the economic, environmental and social aspects.

Reporting Period and Reporting Scope

Unless otherwise specified, this Report covers the financial year from 1 January 2021 to 31 December 2021 (the "Reporting Period"), consistent with the Group's Annual Report, and provides reviews and outlooks. The Report covers the Group's operations in Mainland China, Hong Kong and Macau, and includes performance data for CSC Development. CSC Development publishes a separate Environmental, Social and Governance Report, to which stakeholders can refer for information on its ESG policies and measures. This Report does not contain data on joint ventures or associates that are not led by the Group[16]. The environmental and social data in this Report covers the following:

Headquarters and subsidiary offices

24

Construction and investment projects

163

Prefabricated construction factories

6

Reporting Standards

This Report complies with the requirements of the Environmental, Social and Governance Reporting Guide (the "ESG Guide") published by SEHK. Besides, this report has been prepared in accordance with the GRI Standards: Core option. The GRI Standards are issued by the Global Sustainability Standards Board (GSSB). This Report has also been prepared with reference to the GRI G4 Construction and Real Estate Sector Disclosures ("GRI CRE"). An ESG Guide index and a GRI content index are appended at the end of this Report for the reference of stakeholders.

[16] The Group holds less than 50% of the equity interests.

About this Report

In preparing this Report, the Group applied the following reporting principles to define its content and ensure the reporting quality:

Stakeholder Inclusiveness	The Group identified key stakeholders with reference to the AA1000 Stakeholder Engagement Standard. It engaged with stakeholders through various means, such as interviews, focus group discussions and questionnaires, to gather their views and expectations, to determine the content of this Report, and make responses accordingly.
Sustainability Context	The Group pays attention to international trends and peer practices and describes in its Report the relationship between its business and the economic, environmental and social conditions of the regions where it operates. The Report also describes the impacts and contributions of the Group's subsidiaries in each region through case studies.
Materiality	The Group identified material topics by integrating various standards, guidelines and industry considerations and prioritised them through engaging internal and external stakeholders. These topics are then addressed in this Report.
Completeness	This report covers the significant economic, environmental and social impacts of the Group on all material topics and avoids omitting information concerned by its stakeholders.
Accuracy	The Group has established internal control and review procedures to ensure the accuracy and reliability of the Report.
Balance	This Report discloses both the positive and negative aspects of the Group's performance, and describes not only the achievements but also the challenges it is facing.
Clarity	This Report strives to be concise and easy to understand for stakeholders. Its presentation is aided by visuals such as graphics and tables.
Comparability and Consistency	The report uses consistent statistical and disclosure methodologies as in previous years. It also defines the reporting scope with consistent considerations, allowing stakeholders to make meaningful comparisons with the performance in previous years.
Reliability	The Group has set up a system to collect the information required for reporting and obtained external third-party assurance, carbon audit and KPIs verification of the Report.
Timeliness	This year, the Group publishes both the Annual Report and Sustainability Report at the same time, with the same Reporting Period, to provide stakeholders with timely disclosures of latest performance of the Group.
Quantitative	This Report covers measurable key performance indicators and targets, together with comparative data, where appropriate.

About this Report

Content Management

The Group has established a Sustainability Report Editorial Committee to coordinate the reporting works. The Group continuously updates its electronic data collection platform, provides trainings to responsible staff and answers their queries. An independent sustainability consultant, Carbon Care Asia Limited, has been commissioned to assist the Group in stakeholder engagement, materiality assessment, data collection and quantification, and content compilation. The Group strives to present accurate, reliable and complete information in this Report.

The British Standards Institution (BSI) provides an independent assurance to this report as a third party. This report has been reviewed by the Sustainability Committee and approved by the Board for release in April 2022.

Publication

This report is published electronically in both English and Chinese. In case of any discrepancy in the meaning of wording between the English text and the Chinese text, the Chinese text shall prevail. Both versions are available from the sustainability section of the website of CSCI, and the "HKEXnews" website of the Hong Kong Exchanges and Clearing Limited. A summary of this Report is also issued in the Group's WeChat official account. Stakeholders can keep abreast of the Group's sustainability initiatives through these channels.

Feedback

Through this Report, the Group looks forward to facilitating communication with stakeholders. You are cordially invited to give your views. The Group believes that feedback from stakeholders is essential in helping the Group leap towards a sustainable future. If you have any questions or suggestions about this Report or the Group's sustainability, please email the Group at csci_esg@cohl.com.

Participating Organisations

Hong Kong	Macau	Mainland China
The Hong Kong Chinese Enterprises Association — Construction Industry Committee	The Macau Chinese Enterprises Association	Sichuan Association for Construction Quality and Safety Supervision
The Hong Kong Construction Association	Associação Geral do Sector Imobiliário de Macau	Chengdu Construction Quality Association
Construction Industry Council	School of Business Advisory Board, Macau University of Science and Technology	Yunnan Construction Industry Association
Occupational Safety and Health Council	Macau Construction Industry Association	Foshan Shunde District Village Industrial Park Upgrading and Reconstruction Association
Vocational Training Council	Macau Association of Building Contractors and Developers	Hubei Province Department of Housing and Urban-Rural Development Engineering Projects Approval System Reform Committee
Labour Advisory Board	Macau Construction Association	Shenzhen Municipal Housing and Construction Bureau Prefabricated Building Specialists
Hong Kong Institute of Environmentalists	Macau Wo Kuong Advancement Association	Guizhou Youth Federation
The Employees' Compensation Insurance Residual Scheme Bureau Limited	Association of Study of Environmental Science and Technology of Macau	Shanxi Youth Federation
Employees Compensation Insurer Insolvency Bureau	Macau Construction Safety Association	
Development Bureau Joint Sub-committee on Streamlining of Development Control		
Registered Contractors' Disciplinary Board Panel		

Summary of Key Performance Indicators[17]

Environmental Performance[18,19]

Air Emissions

Category	Emissions (tonne)		
	Operations within the Reporting Boundary	CSC Development	Total
Nitrogen oxides	2,269.4	240.6	2,509.9
Sulphur oxides	148.8	160.6	309.4
Respirable suspended particulates	139.0	8.3	147.4

[17] Comparison against previous year data is available from the sustainability section of CSCI's website.

[18] To facilitate readers' comprehensive understanding of the quantified environmental performance of the Group, the performance of CSC Development is also provided. The environmental performance of CSC Development is aligned with its 2021 Sustainability Report, while some are independently assessed.

[19] The total amount and breakdowns may not be consistent at the last digit due to rounding.

Summary of Key Performance Indicators

Greenhouse Gas Emissions[20]

Scope	Emission source	Emissions (tonne of CO_2-e)					
		Operations within the Reporting Boundary		CSC Development		Total	
Scope 1:							
Direct emissions	Combustion of fossil fuels	93,473		752,013		845,486	
	Industrial production processes — welding	278	99,515	N.A.	752,018	278	851,532
	Fugitive emissions	5,764		5		5,769	
Scope 2:							
Energy indirect emissions	Purchased electricity	80,780	82,357	20,753	20,753	101,533	103,110
	Purchased heat	1,576		N.A.		1,576	
Scope 3[21]							
Other indirect emissions	Industrial production processes — welding (contractor)	10,085		N.A.		10,085	
	Stationary combustion (contractor)	33,462		N.A.		33,462	
	Waste paper disposal	735	45,371	N.A.	95	735	45,465
	Water consumption	645		N.A.		645	
	Sewage treatment	309		N.A.		309	
	Air business travel	135		95		229	
Total GHG emissions			227,242		772,866		978,127
GHG intensity (tonne of CO_2-e/HKD million)							12.94

[20] GHG emissions quantification process and emission factors refer to the national standards and guidelines of the People's Republic of China (Guidelines for Accounting and Reporting Greenhouse Gas Emissions China Public Building Operation Units (Enterprises) (Trial) and Guidelines for Accounting and Reporting Greenhouse Gas Emissions Other Industrial Enterprises (Trial)), Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong prepared by the Environmental Protection Department and the Electrical and Mechanical Services Department of Hong Kong, SME Carbon Audit Toolkit compiled by the University of Hong Kong and the City University of Hong Kong, and the international standards ISO 14064-1 and the Greenhouse Gas Protocol.

[21] The GHG emissions from waste paper disposal, water consumption and sewage treatment only include emissions generated from operations in Hong Kong.

Summary of Key Performance Indicators

Waste Generation

Category	Amount (tonne)		
	Operations within the Reporting Boundary	CSC Development	Total
Hazardous waste generated			
Total hazardous waste	16,927.0	0.7	16,927.7
Hazardous waste intensity (tonne/HKD million)			0.22
Non-hazardous waste generated			
Construction waste	2,851,691.4	234,283.8	3,156,306.4
Other non-hazardous waste	70,331.2		
Total non-hazardous waste	2,922,022.6	234,283.8	3,156,306.4
Non-hazardous waste intensity (tonne/HKD million)			40.8

Summary of Key Performance Indicators

Energy Consumption

Category	Energy Consumption (MWh)		
	Operations within the Reporting Boundary	CSC Development	Total
Gasoline	22,001	896	22,897
Diesel	330,535	1,210	331,745
Liquefied petroleum gas	1,353	177	1,530
Liquefied natural gas	81	0	81
Pipeline gas	1,694	0	1,694
Acetylene	758	0	758
Natural gas	5,385	660	6,045
Methanol	354	0	354
Lignite	N.A.	2,099,178	2,099,178
Purchased electricity	148,906	37,519	186,425
Purchases heating (including heated water and steam)	3,981	0	3,981
Sold electricity	N.A.	(89,489)	(89,489)
Sold heating	N.A.	(1,665,266)	(1,665,266)
Total energy consumption	515,047	384,885	899,932
Energy intensity (MWh/HKD million)			11.6
Renewable energy	3,810	0	3,810

Summary of Key Performance Indicators

Water and Sewage

Category	Amount (cubic metre)		
	Operations within the Reporting Boundary	CSC Development	Total
Water consumption			
Total water consumption[22]	5,474,160	1,872,804	7,346,964
Water consumption intensity (cubic metre/HKD million)			95.0
Sewage discharge			
Total sewage discharge	4,817,940	65,010	4,882,950
Water discharge intensity (cubic metre/HKD million)			63.2
Total water reused[23]	199,007	No statistics	199,007

Packaging Materials for Finished Products

Category	Amount (tonne)		
	Operations within the Reporting Boundary	CSC Development	Total
Timber for packaging	5,082.3	149.4	5,231.6
Total consumption of packaging materials			0.07

[22] Including freshwater supplied to contractors at construction sites by the Group.

[23] Reused in construction sites of the Group, not used by other organisations.

Summary of Key Performance Indicators

Use of Raw Materials[24]

Category	Amount Usage of operations within the Reporting Boundary
Non-renewable materials	
Concrete (cubic metre)	3,253,978
Cement mortar (cubic metre)	205,481
Reinforced steel bar (tonne)	622,436
Steel beams (tonne)	20,534
Iron sheet pile (tonne)	9,116
Wooden sheet pile (tonne)	1,717,447
Cement (tonne)	549,869
River sand (tonne)	531,523
Stones (tonne)	2,385,728
Bricks (tonne)	1,069,789
Concrete floor materials (tonne)	3,253
Aluminium products (tonne)	12,746
Steel products (tonne)	12,422
Silica gel (tonne)	8,424
Glass (tonne)	61,887
Timber for packaging (tonne)	5,097
Other raw materials and packaging materials (tonne)	0.2
Paper (tonne)	14,181
Renewable materials	
Bamboo flooring (tonne)	5
Cotton insulation material (tonnes)	10
Wheat straw board (tonnes)	2

[24] The relevant data of CSC Devlelopment was not calculated.

Summary of Key Performance Indicators

Social Performance[25]

Employment

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Current employees[26]	Gender	Male	7,698		3,825		11,523	
		Female	2,109		609		2,718	
	Age group	30 or below	2,642		1,509		4,151	
		31-40	3,382		1,383		4,765	
		41-50	2,000		990		2,990	
		51 or above	1,783		552		2,335	
	Employment rank	Senior	24		11		35	
		Middle	199	9,807	34	4,434	233	14,241
		Executive	1,837		343		2,180	
		General employees	7,747		4,046		11,793	
	Region	Hong Kong	5,409		340		5,749	
		Macau	1,165		Not applicable		1,165	
		Mainland China	3,233		3,828		7,061	
		USA	Not applicable		96		96	
		Canada	Not applicable		170		170	

25 To facilitate readers' comprehensive understanding of the quantified social performance of the Group, the performance of CSC Development is also presented. CSC Development's respective data are either as quoted from its 2021 Sustainability Report or independently assessed.

26 Total number of employees in 31 Dec 2021.

Summary of Key Performance Indicators

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Other workers	Region	Hong Kong	17,137	30,893	Not applicable	146	17,137	31,039
		Macau	7,131		Not applicable		7,131	
		Mainland China	6,625		114		6,739	
		Other	Not applicable		32		32	
New hires[27]	Gender	Male	1,891	2,320	860	1,024	2,751	3,344
		Female	429		164		593	
	Age group	30 or below	1,125		605		1,730	
		31–40	736		291		1,027	
		41–50	296		95		391	
		51 or above	163		33		196	
	Region	Hong Kong	1,382		No statistics by region		No statistics by region	
		Macau	420					
		Mainland China	518					

[27] Only include monthly paid employees who have completed the probation period (or no probation period).

Summary of Key Performance Indicators

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Rate of new hires[28]	Gender	Male	27%		30%		28%	
		Female	28%		38%		30%	
	Age group	30 or below	44%		47%		45%	
		31–40	23%		30%		25%	
		41–50	19%	27%	15%	31%	18%	28%
		51 or above	14%		8%		12%	
	Region	Hong Kong	32%		No statistics by region		No statistics by region	
		Macau	42%					
		Mainland China	26%					

[28] Rate of new hires = (Number of new hires in 2021 / Number of current monthly paid employees on 31 Dec 2021) x 100%.

Summary of Key Performance Indicators

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Number of employee turnover[29]	Gender	Male	1,401		573		1,974	
		Female	351		87		438	
	Age group	30 or below	672		339		1,011	
		31–40	624		192		816	
		41–50	270		85		355	
		51 or above	186		44		230	
	Region	Hong Kong	1,190	1,752	86	660	1,276	2,412
		Macau	52		Not applicable		52	
		Mainland China	510		535		1,045	
		USA	Not applicable		16		16	
		Canada	Not applicable		20		20	
		Other	Not applicable		3		3	

[29] Only include monthly paid employees who have completed the probation period (or no probation period).

Summary of Key Performance Indicators

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Rate of employee turnover[30]	Gender	Male	20%		20%		20%	
		Female	23%		20%		22%	
	Age group	30 or below	26%		26%		26%	
		31–40	20%		20%		20%	
		41–50	17%	21%	13%	20%	16%	20%
		51 or above	16%		11%		14%	
	Region	Hong Kong	28%		No statistics by region		No statistics by region	
		Macau	5%					
		Mainland China	26%					

30 Rate of employee turnover = (Number of employee turnover in 2021 / Number of monthly paid employees on 31 Dec 2021) x 100%.

Summary of Key Performance Indicators

Health and Safety

Statistics		Operations within the Reporting Boundary	CSC Development	Total
Employees	Number of recordable work-related injuries	12	5	17
	Work-related injury rate[31]	0.11	0.11	0.11
	Number of high-consequence work-related injuries[32]	4	0	4
	High-consequence work-related injury rate[33]	0.04	0.0	0.03
	Number of work-related fatalities[34]	0	1	1
	Work-related fatality rate[35]	0	0.02	0.007
	Lost days due to work-related injuries	5,169	423	5,592
	Number of hours worked[36]	21,015,067	9,168,000	30,183,067
Other workers[37]	Number of recordable work-related injuries	134	0	134
	Work-related injury rate	0.44	0.0	0.44
	Number of high-consequence work-related injuries	74	0	74
	High-consequence work-related injury rate	0.25	0.0	0.25
	Number of work-related fatalities[38]	0	0	0
	Work-related fatality rate	0.0	0.0	0.0
	Lost days due to work-related injury	486[39]	158	644
	Number of hours worked	60,323,272	40,560	60,363,832
Total Workforce	Lost time injury rate (LTIR)[40]	0.43	0.11	0.39

31 Work-related injury rate = (Number of recordable injuries / Original number of total working hours) × 200,000.

32 A high-consequence work-related injury is an injury that cannot or is not expected to recover fully to pre-injury health status within 6 months.

33 High-consequence work-related injury rate = (Number of high-consequence injuries / Original number of total working hours) × 200,000.

34 The Group has no work-related fatalities for employees in 2019 and 2020.

35 Work related fatality rate = (Number of work-related causality / Original number of total working hours) × 200,000.

36 Estimated by number of hours worked per employee per working day, 7 to 9 hours per day depending on the employee's location.

37 Including contractors/ sub-contractors, interns, and other workers whose work or venue of work are controlled by the Group. A majority of them are site workers.

38 There were three work-related fatalities of other workers in 2019 and no fatalities in 2020.

39 Some other workers are paid on a daily basis and are covered by insurance in case of injury. Replacements will be arranged by their employers, so there is no loss of working days.

40 MSCI ESG Indicator. LTIR = (Number of recordable injuries of total workforce / Original number of working hours of total workforce) x 200,000

Training and Development[41]

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Training percentage	Gender	Male	84%	86%	98.3%	97%	88%	89%
		Female	95%		92.1%		95%	
	Employee rank	Senior	78%		100%		85%	
		Middle	88%		100%		90%	
		Executive	82%		100%		85%	
		General	87%		97.2%		90%	
Average training hours	Gender	Male	12.3	12.7	38.1	37.2	19.8	19.6
		Female	14.7		31.2		18.4	
	Employee rank	Senior	18.6		80.0		35.7	
		Middle	21.4		28.5		20.4	
		Executive	21.5		29.8		19.6	
		General	12.6		38.0		19.5	

[41] Including data of employee turnover who has received training in the Reporting Period.

Supply Chain Management[42]

Statistics		Operations within the Reporting Boundary		CSC Development		Total	
Number of suppliers	Hong Kong	574	2,627	69	2,321	643	4,948
	Macau	147		Not applicable		147	
	Mainland China	1,906		841		2,747	
	USA	Not applicable		83		83	
	Canada	Not applicable		1,204		1,204	
	Other[43]	Not applicable		124		124	

42 The Group consistently applies supplier recruitment, management and monitoring practices to all suppliers of the same category to ensure fairness of the system.

43 Including suppliers in Europe, Australia and other locations.

Summary of Key Performance Indicators

Anti-corruption

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Number of people receiving information on anti-corruption policies and procedures	Governance body							9
	Employee rank	Senior	17		11		28	
		Middle	172		34		206	
		Executive	1,368		343		1,711	
		General	5,176	6,733	2,605	2,993	7,781	9,726
	Region	Hong Kong	4,585		No statistics by region		No statistics by region	
		Macau	13					
		Mainland China	2,135					
Percentage of people receiving information on anti-corruption policies and procedures	Governance body							100%
	Employee rank	Senior	71%		100%		80%	
		Middle	86%		100%		88%	
		Executive	74%		100%		78%	
		General	67%	69%	64%	68%	66%	68%
	Region	Hong Kong	85%		No statistics by region		No statistics by region	
		Macau	1%					
		Mainland China	66%					

Summary of Key Performance Indicators

Statistics			Operations within the Reporting Boundary		CSC Development		Total	
Number of people receiving anti-corruption trainings	Board of Directors							9
	Employee rank	Senior	17		11		28	
		Middle	170		32		202	
		Executive	1,342		142		1,484	
		General	5,153	6,682	3,140	3,325	8,293	10,007
	Region	Hong Kong	4,585					
		Macau	13		No statistics by region		No statistics by region	
		Mainland China	2,084					
Percentage of people receiving anti-corruption trainings	Board of Directors							100%
	Employee rank	Senior	71%		100%		80%	
		Middle	85%		94%		87%	
		Executive	73%		41%		68%	
		General	67%	68%	78%	75%	70%	70%
	Region	Hong Kong	85%					
		Macau	1%		No statistics by region		No statistics by region	
		Mainland China	64%					
Average anti-corruption training hours	Board of Directors							1.7
	Employee rank	Senior	2.3		3.6		2.7	
		Middle	3.2		5.5		3.6	
		Executive	2.6		1.9		2.5	
		General	1.8	2.0	4.1	3.9	2.6	2.6
	Region	Hong Kong	1.9					
		Macau	0.05		No statistics by region		No statistics by region	
		Mainland China	2.8					

Summary of Key Performance Indicators

Community Investment

Statistics	Operations within the Reporting Boundary	CSC Development	Total	Unit
Total amount of investment	2,305	19	2,324	thousands HKD
Number of participating volunteers	4,157	121	4,278	number of people
Number of volunteer participation hours	12,215	141	12,356	hour

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Verification Credential

This is to verify that BSI Hong Kong has conducted a KPIs verification for:

China State Construction International Holdings Limited

Verified KPIs Summary (1-Jan-2021 to 30-Dec-2021) as following:

1) KPI1 - Green House Gas (GHG) Emission Intensity (Scope 1+2)
Total GHG emission divided by Revenue
= 12.35 tCO2-e/ million HKD

2) KPI2 - FSC or PEFC certified wood purchase percentage
FSC or PEFC certified wood purchased divided by total wood purchased (x100)
= 99.8%

3) KPI3 - Work-related injury rate per 1,000 workers
Number of work-related injuries divided by monthly cumulative average number of employees and subcontracted workers (x1,000)
= 3.33 per 1,000 workers

Signed on behalf of BSI:

Mr. Stephen Yu
Chief Operating Officer – Hong Kong

Last Assessment Date: 2022-04-22

Note:

This verification credential is for the exclusive use of the verification credential holder and is provided pursuant to the agreement between BSI's and its client. BSI responsibility and liability are limited to the terms and conditions of the agreement. BSI assumes no liability to any party, other than to the client in accordance with the agreement for any loss, expense or damage occasioned by the use of this verification credential. Only the client is authorized to copy or dispute this verification. Any use of the BSI name or one of its marks for the sale or advertisement of the tested material, product or services must first be approved in writing by BSI. The issuing of this verification credential does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any related product

Information and Contact: BSI Pacific Limited, 23rd Floor, Cambridge House, Taikoo Place, 979 King's Road, Island East, Hong Kong

SUSTAINABLE DEVELOPMENT GOALS

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INDEPENDENT ASSURANCE OPINION STATEMENT

Statement No.: **SRA-HK 770465**

China State Construction International Holdings Limited
2021 Sustainability Report

The British Standards Institution is independent of China State Construction International Holdings Limited, and its subsidiaries (hereafter referred to as "CSCI" collectively in this statement), and has no financial interest in the operation of CSCI other than for the assessment and assurance of CSCI 2021 Sustainability Report (the "Report").

This independent assurance opinion statement has been prepared for CSCI solely for the purposes of assuring its statements relating to the Report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or towards any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of CSCI.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by CSCI. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to CSCI only.

Scope

The scope of engagement agreed upon with CSCI includes the following:

1. The assurance covers the whole Report and, focuses on systems and activities of CSCI in Mainland China, Hong Kong, Macau and oversea, which include construction, infrastructure investment, façade contracting and infrastructure operation businesses, during the period from 1st January 2021 to 31st December 2021. The Report is prepared in accordance with the Core Option of GRI Sustainability Reporting Standards ("GRI Standards") and in accordance with the Hong Kong Stock Exchange's ("HKEX") Environmental, Social and Governance Reporting Guide ("ESG Guide").

2. Type 1 Moderate Level of Assurance in accordance with the AA1000 Assurance Standard, AA1000AS v3 evaluates the nature and extent of CSCI's adherence to four reporting principles: Inclusivity, Materiality, Responsiveness and Impact. The specified sustainability performance information/data disclosed in the Report has been evaluated.

This statement was prepared in English and translated into Chinese for reference only.

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Opinion Statement

We conclude that the Report provides a fair view of CSCI's sustainability programmes and performance in the reporting year. We believe that the economic, social and environmental performance indicators are fairly represented in the Report, in which CSCI's efforts to pursue sustainable development are widely recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurors. We planned and performed this part of our work to obtain the necessary information and explanations. We considered CSCI has provided sufficient evidence that CSCI's self-declaration of compliance with the Core Option of GRI Standards and the HKEX ESG Guide were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to CSCI's policies to provide a check on the appropriateness of statements made in the Report;
- Discussion with senior executives on CSCI's approach to stakeholder engagement. We had no direct contact with external stakeholders;
- Interview with staff involved in sustainability management, report preparation and provision of report information;
- Review of key organizational developments;
- Review of supporting evidence for claims made in the Report; and
- An assessment of the company's reporting and management processes concerning reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact.

Conclusions

A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact and the HKEX ESG Guide, and in accordance with GRI Standards is set out below:

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Inclusivity
The Report has reflected the fact that CSCI is seeking the engagement of its stakeholders through numerous channels such as Emails and announcements; Internal meetings; Training courses; Corporate newsletters; Grievance mechanism; General meetings; Annual reports, interim reports and announcements; Roadshow and reverse roadshow; Investor meetings; Indices and ratings; Tender meetings; Project briefings; Tea gatherings and industry activities; Procurement process; Review and evaluation; Performance monitoring; Supplier and subcontractor meetings; Public consultation; Working meetings; Feedback through industry associations; Seminars and workshops; Press conferences and news releases; Community opinion surveys; Charity event planning and participation and more.

CSCI's operation involves various methods of engaging its stakeholders on a daily basis. The Report covers economic, social and environmental aspects of concern to its stakeholders with a fair level of disclosure. In our professional opinion, CSCI adheres to the principle of Inclusivity. Our view of areas for enhancement of the Report was adopted by CSCI before the issue of this opinion statement.

Materiality
CSCI publishes sustainability information that enables its stakeholders to make informed judgments about the company's management and performance. In our professional opinion, the Report adheres to the principle of Materiality and identifies CSCI's material aspects by using appropriate methods of materiality analysis and demonstrating material issues in a matrix form. Areas for enhancement of the Report were adopted by CSCI before the issue of this opinion statement.

Responsiveness
CSCI has implemented practices that respond to the expectations and perceptions of its stakeholders. These include various surveys and feedback mechanisms for both internal and external stakeholders. In our professional opinion, CSCI adheres to the principle of Responsiveness. Areas for enhancement of the Report were adopted by CSCI before the issue of this opinion statement.

Impact
CSCI has established processes to understand, measure and evaluate its impacts in qualitative and quantitative way. These processes enable CSCI to assess its impact and disclose them in the Report. In our professional opinion, CSCI adheres to the principle of Impact. Areas for enhancement of the Report were adopted by CSCI before the issue of this opinion statement.

GRI Standards Reporting
CSCI provided us with their self-declaration of compliance with GRI Standards "In Accordance" - Core option.

Based on our verification review, we are able to confirm that social responsibility and sustainable development disclosures in all three categories (Environmental, Social and Economic) are reported in accordance with the GRI Standards: Core option.

In our professional opinion the report covers CSCI's social responsibility and sustainability issues. Areas for enhancement of the Report were adopted by CSCI before the issue of this opinion statement.

HKEX ESG Guide Reporting
Based on our verification review, we are able to confirm that social responsibility and sustainable development key performance indicators and disclosures in two ESG subject areas (Environmental and Social) are reported on basis of the HKEX ESG Guide.

In our professional opinion, the Report covers CSCI's social responsibility and sustainability issues. Areas for enhancement of the report were adopted by CSCI before the issue of this opinion statement.

Assurance Level
The Type 1 Moderate Level of Assurance provided in our review is defined by the scope and methodology described in this statement.

Responsibility & Limitations
It is the responsibility of CSCI's senior management to ensure that the information being presented in the Report is accurate. The assurance is limited by information presented by CSCI. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence
The assurance team was composed of Lead Auditors, who are experienced in the industrial sector, and trained in a range of sustainability, environmental and social standards including GRI G3, GRI G3.1, GRI G4, GRI Standards, AA1000, HKEX ESG Guide, UNGC's Ten Principles, ISO20121, ISO14064, ISO 14001, OHSAS 18001, ISO45001, ISO 9001, and ISO 10002, etc. British Standards Institution is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Mr. Stephen Yu
Chief Operating Officer – Hong Kong
China Operational Resilience Director

Hong Kong
26 April 2022

AA1000
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000-157/V3-TBAIV

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2022-04-17

China State Construction International Holdings Limited
28/F, China Overseas Building
139 Hennessy Road
Wan Chai
Hong Kong

Greenhouse Gas Emission Verification

British Standards Institution (hereinafter referred to as BSI) was engaged to complete GHG verification to the 10 projects managed by China State Construction International Holdings Limited (hereinafter referred to as CSCI) and completed on 26th April 2022. The aim of this verification was to provide a reasonable assurance on the completeness and accuracy of the data consolidated in the GHG Emissions Inventory by CSCI.

Verification Scope

The independent verification activity covers the greenhouse gas emission data for the period from 1 January 2021 to 31 December 2021 of CSCI. The organizational boundary was established following the operational control approach, which only limited to 10 construction sites from engineering business:

1) Luo Yangju Community Resettlement Project: Luqiao District, Taizhou City, Zhejiang Province, China
2) E-27 Resettlement housing construction projects & E-28a Central Green axis area of Wenzhou City: Wenzhou City, Zhejiang Province, China
3) Construction Project in Ba Jiao Bay, Yantai, Shandong Province, China
4) Construction Project in Laixi City, Qingdao, Shandong Province, China
5) C340B-Main Works for Barra Station of Macau Light Rapid Transit
6) Studio City Phase 2
7) Relocation of Sha Tin Sewage Treatment Works to Caverns - Site Preparation and Access Tunnel Construction
8) Construction of Public Housing Development at Tuen Mun Area 54 Site 3&4 (East)
9) Construction of New Student Dormitory, Academic and Administration Building in Hong Kong Baptist University, Kowloon Tong
10) Redevelopment of Kowloon Tsai Swimming Pool Complex, Kowloon City

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SUSTAINABLE DEVELOPMENT GOALS

Verification Methodology

Within the verification scope, BSI reviewed the activity data and supporting evidence of the selected samples out of the 10 construction sites. BSI obtained supporting evidence to assess greenhouse gas inventory by conducting interviews and data collection with the relevant personnel of CSCI. The verification was conducted in accordance with ISO 14064-3:2019 "Specification with guidance for the validation and verification of greenhouse gas assertions". Materiality threshold of ±5% was adopted for this verification.

BSI verification team did not take part in the GHG data preparation process.

The following opinion was recommended by the verification team.

- No material error or omission was identified in the GHG Emission Inventory. There is no misstatement for GHG calculation. The direct and indirect greenhouse gas emission from 10 construction sites of CSCI for the period from 01-Jan-2021 to 31-Dec-2021 are as below,

Greenhouse Gas Emission	Tonnes of CO_2 equivalent
Direct Greenhouse Gas Emissions	2,552.72
Indirect Greenhouse Gas Emissions	8,812.67
Total Greenhouse Gas Emissions	11,365.39

- Data quality was considered acceptable in meeting the principles as set out in ISO 14064-1:2018.

Signed on behalf of BSI:

Stephen Yu
Chief Operating Officer – Hong Kong

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Material Aspect Mandatory Disclosure Requirements	Content	Page Index/Remarks
Governance Structure	(i) A disclosure of the board's oversight of ESG issues.	Board Statement (20), Sustainable Governance (22–23)
	(ii) The board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses).	Board Statement (20), Sustainability Strategy (24), Sustainability Risks (40–41), Material Topics (51–52)
	(iii) How the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	Board Statement (20), Sustainability Roadmap (28–38)
Reporting Principles	Materiality: The ESG report should disclose: (i) the process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement.	Stakeholder Participation (46–56), About this Report (132–133)
	Quantitative: Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable) should be disclosed.	About this Report (133)
	Consistency: The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	About this Report (133)
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report.	About this Report (132)

SEHK ESG Reporting Guide Content Index

Comply or Explain Provisions		
A. Environmental		
Aspect A1: Emissions		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Environmentally Friendly Construction (76–83), Innovative Technologies and Applications (92-93)
A1.1	The types of emissions and respective emissions data.	Environmentally Friendly Construction (77), Environmental Performance (136)
A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity.	Environmentally Friendly Construction (77), Environmental Performance (137)
A1.3	Total hazardous waste produced and, where appropriate, intensity.	Environmentally Friendly Construction (82–83), Environmental Performance (138)
A1.4	Total non-hazardous waste produced and, where appropriate, intensity.	Environmentally Friendly Construction (82–83), Environmental Performance (138)
A1.5	Description of emissions target(s) set and steps taken to achieve them.	Sustainability Roadmap (31)
A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Sustainability Roadmap (32), Environmentally Friendly Construction (82)

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Comply or Explain Provisions		
A. Environmental		
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Environmentally Friendly Construction (78–83), Innovation and Applications (93)
A2.1	Direct and/or indirect energy consumption by type in total and intensity.	Environmentally Friendly Construction (78–79), Environmental Performance (139)
A2.2	Water consumption in total and intensity.	Environmentally Friendly Construction (80), Environmental Performance 140)
A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Sustainability Roadmap (32) Environmentally Friendly Construction (78–79)
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Sustainability Roadmap (32) Environmentally Friendly Construction (80)
A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced.	Environmentally Friendly Construction (140)
Aspect A3: The Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Environmentally Friendly Construction (76, 84)
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Environmentally Friendly Construction (76, 84)
Aspect A4: Climate Change		
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Response to Climate Change (70–75), Carbon Neutral Construction and O•PARK2 (57-69)
A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Response to Climate Change (70–75), Carbon Neutral Construction and O•PARK2 (57-69)

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Comply or Explain Provisions		
B. Social		
Aspect B1: Employment		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Employment System and Welfare (86–88)
B1.1	Total workforce by gender, employment type, age group and geographical region.	Employment System and Welfare (86), Social Performance (142)
B1.2	Employee turnover rate by gender, age group and geographical region.	Social Performance (146)
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	Work Safety and Health (50–51)
B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Social Performance (147)
B2.2	Lost days due to work injury.	Social Performance (147)
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Work Safety and Health (84–85)
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Staff training (88-89)
B3.1	The percentage of employees trained by gender and employee category.	Social Performance (148)
B3.2	The average training hours completed per employee by gender and employee category.	Social Performance (148)

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Comply or Explain Provisions		
B. Social		
Aspect B4: Labour Standards		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	Employment System and Welfare (87)
B4.1	Description of measures to review employment practices to avoid child and forced labour.	Employment System and Welfare (87)
B4.2	Description of steps taken to eliminate such practices when discovered.	Not applicable During the reporting period, the Group did not detect any irregularities in its operations
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Sustainability Roadmap (33), Engineering Quality and Supplier Chain (90)
B5.1	Number of suppliers by geographical region.	Engineering Quality and Supply Chain (90), Social Performance (149)
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	Engineering Quality and Supply Chain (90), Social Performance (149)
B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Sustainability Roadmap (33), Engineering Quality and Supply Chain (90)
B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Sustainability Roadmap (33), Carbon Neutral Construction and O·PARK2 (61), Engineering Quality and Supply Chain (90)

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Comply or Explain Provisions		
B. Social		
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Engineering Quality and Supply Chain (89–90), Customer Privacy (100)
B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not applicable
B6.2	Number of products and service related complaints received and how they are dealt with.	Not applicable
B6.3	Description of practices relating to observing and protecting intellectual property rights.	Protection of Intellectual Property (101)
B6.4	Description of quality assurance process and recall procedures.	Engineering Quality and Supply Chain (89–90), Innovative Technologies and Applications (93–97)
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Customer Privacy (100)

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Comply or Explain Provisions		
B. Social		
Aspect B7: Anti-corruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Fighting Corruption and Promoting Integrity (99)
B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Fighting Corruption and Promoting Integrity (99)
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Fighting Corruption and Promoting Integrity (99)
B7.3	Description of anti-corruption training provided to directors and staff.	Fighting Corruption and Promoting Integrity (90), Social Performance (150–151)
Aspect B8: Community Investment		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Community Involvement and Public Welfare (98)
B8.1	Focus areas of contribution.	Community Involvement and Public Welfare (98)
B8.2	Resources contributed to the focus area.	Social Performance (152)

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 101: Foundation 2016 (excluding any disclosures)			
General Disclosures			
GRI 102: General Disclosures 2016			
Organisational profile			
102-1	Name of the organisation	About the Group (2)	
102-2	Activities, brands, products, and services Operational	About the Group (2–4)	During the Reporting Period, the Group did not have any products and services banned in any market.
102-3	Location of headquarters	About the Group (2)	
102-4	Location of operations	About the Group (2-4)	
102-5	Ownership and legal form	About the Group (2)	
102-6	Markets served	About the Group (2-4)	Detailed markets, customers and project type information are available on p.34–47 of CSCI's Annual Report 2021.
102-7	Scale of the organisation	About the Group (2–5, 16–17), About this Report (132)	Detailed financial and operating point information is set out on page 28–47 of CSCI's Annual Report 2021.
102-8	Information on employees and other workers	Employment System and Welfare (86), Engineering Quality and Supply Chain (90), Social Performance (142–143)	The Group's construction projects engage with workers are not directly employed by the Group. They mainly work for contractors and/or subcontractors. There were no significant changes in the total number of employees during the Reporting Period.
102-9	Description of the organisation's supply chain	Engineering Quality and Supply Chain (90)	
102-10	Significant changes to the organisation and its supply chain	About this Report (132)	There were no significant changes to the Group and its supply chain in the Reporting Period.
102-11	Precautionary Principle or approach	Sustainability Strategy (24–26), Sustainability Risks (40–41)	Please refer to the Group's Sustainability Approaches and Sustainability Policies. Their full text is available online: https://www.csci.com.hk/en/sus_gov.php

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 102: General Disclosures 2016			
Organisational profile			
102-12	External initiatives	Sustainability Strategy (25–26), Sustainability Commitments and Achievements (42–43)	
102-13	Memberships of associations	Participating Organizations (135)	
Strategy			
102-14	Statement from senior decision-maker	Board Statement (20)	
Ethics and Integrity			
102-16	Values, principles, standards and norms of behaviour	Sustainability Strategy (24–26)	Business Responsibility (99–101)
Governance			
102-18	Governance structure	Corporate Governance (22–23)	Please refer to page 62–80 of CSCI's Annual Report 2021 for details.
Stakeholder engagement			
102-40	List of stakeholder groups	Stakeholder Engagement (47–48)	
102-41	Collective bargaining agreements	Not applicable	The Group's employees were not protected by collective bargaining agreements.
102-42	Identifying and selecting stakeholders	Corporate Governance (46)	
102-43	Approach to stakeholder engagement	Corporate Governance (46)	
102-44	Key topics and concerns raised	Corporate Governance (47-50)	

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 102: General Disclosures 2016			
Reporting practice			
102-45	Entities included in the consolidated financial statements	About this Report (132)	Please refer to page 197–205 of CSCI's Annual Report 2021 for details.
102-46	Defining report content and topic Boundaries	Material Topics (55–56), About this Report (132)	
102-47	List of material topics	Material Topics (55–56)	
102-48	Restatements of information	Not applicable	This report did not include restatements of information from previous reports.
102-49	Changes in reporting	Material Topics (52–53)	
102-50	Reporting period	About this Report (132)	
102-51	Date of most recent report	Not applicable	The most recent report was the 2021 Sustainability Report, published on 31 May 2021.
102-52	Reporting cycle	About this Report (132)	
102-53	Contact point for questions regarding the report	About this Report (134)	
102-54	Claims of reporting in accordance with GRI Standards	About this Report (132)	
102-55	GRI Content Index	GRI Standard Content Index (164–176)	
102-56	External assurance	About this Report (134), Assurance Statements (154–155)	

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 102: General Disclosures 2016			
Material Topics			
Economic performance			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), About the Group (4–5)	
103-2	The management approach and its components	About the Group (4–5)	Please refer to page 20–27 of CSCI's Annual Report 2021 for details.
103-3	Evaluation of the management approach		
GRI 201: Economic Performance 2016			
201-1	Economic value directly generated and distributed	About the Group (4–5)	
Anti-Corruption			
GRI 103: Management approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51-56), Fighting Corruption and Promoting Integrity (99)	
103-2	The management approach and its components	Fighting Corruption and Promoting Integrity (99)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 205: Anti-corruption 2016			
205-3	Confirmed incidents of corruption and actions taken	Not applicable	During the Reporting Period, the Group and its employees were not involved in cases of corruption. There was no prosecution due to corruption.
Prevention of Anti-competitive Practices			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Fair Competition (100)	
103-2	The management approach and its components	Fair Competition (100)	
103-3	Evaluation of the management approach		
GRI 206: Anti-competitive Behaviour 2016			
206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Not applicable	During the Reporting Period, the Group was not involved in any cases of anti-competitive behaviour, anti-trust, and monopoly practices.
Materials			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (76,84)	
103-2	The management approach and its components	Environmentally Friendly Construction (76,84)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 301: Materials 2016			
301-1	Materials used by weight or volume	Environmental Performance (141)	
Energy **GRI 103: Management Approach 2016**			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (78–79)	
103-2	The management approach and its components	Environmentally Friendly Construction (78–79)	
103-3	Evaluation of the management approach		
GRI 302 : Energy 2016			
302-1	Energy consumption within the organisation	Environmentally Friendly Construction (78–79), Environmental Performance (139)	
Water and Effluents **GRI 103: Management Approach 2016**			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (80–81)	
103-2	The management approach and its components	Environmentally Friendly Construction (80–81)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 303: Water and Effluents 2018			
303-1	Interactions with water as a shared resource	Sustainability Strategy (26), Environmentally Friendly Construction (80)	
303-2	Management of water discharge-related impacts		The effluent discharge standards are in accordance with the requirements of the Water Pollution Prevention and Control Law of the People's Republic of China, the Water Pollution Control Ordinance of Hong Kong and the Environmental Act of Macau, etc.
303-5	Water consumption	Environmental Performance (80)	There is no significant water storage in the Group and water storage is not a significant impact of the Group.
Greenhouse Gases			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (77–79)	
103-2	The management approach and its components	Environmentally Friendly Construction (77–79)	
103-3	Evaluation of the management approach		
GRI 305: Emissions 2016			
305-1	Direct (Scope 1) GHG emissions	Environmentally Friendly Construction (77), Environmental Performance (136–137)	The Group's short-term carbon reduction targets are based on its 2018 greenhouse gas emission intensity. For details of emissions for the year, please refer to p.100 of the Group's 2018 Sustainability Report. https://www.csci.com.hk/en/sus_down.php The Group does not generate significant carbon emissions from biogenic sources.
305-2	Energy indirect (Scope 2) GHG emissions		
305-3	Other indirect (Scope 3) GHG emissions		
305-4	GHG emissions intensity		
305-7	Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emissions		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
Waste			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (82–83)	
103-2	The management approach and its components	Environmentally Friendly Construction (82–83)	
103-3	Evaluation of the management approach		
GRI 306: Waste 2020			
306-1	Waste generation and significant waste-related impacts	Environmentally Friendly Construction (82–83)	
306-2	Management of significant waste-related impacts		
306-3	Waste generated	Environmentally Friendly Construction (82–83), Environmental Performance (138)	
A Safe and Healthy Working Environment			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Work Safety and Health (84–85)	
103-2	The management approach and its components	Work Safety and Health (84–85)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 403: Occupational Health and Safety 2018			
403-1	Occupational health and safety management system	Work Safety and Health (84–85)	
403-2	Hazard identification, risk assessment, and incident investigation		
403-3	Occupational health services		
403-4	Worker participation, consultation, and communication on occupational health and safety		
403-5	Worker training on occupational health and safety		
403-6	Promotion of worker health		
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Work Safety and Health (84–85), Engineering Quality and Supplier Chain (90)	
403-9	Work-related injuries	Work Safety and Health (84–85), Social Performance (147)	
Prevention of Child Labour or Forced Labour			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Employment System and Welfare (87)	
103-2	The management approach and its components	Employment System and Welfare (87)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
GRI 408: Child Labour 2016			
408-1	Operations and suppliers at significant risk for incidents of child labour	Not applicable	During the Reporting Period, the Group did not identify any operations and suppliers that are at significant risk for incidents of child labour.
GRI 409: Forced or Compulsory Labour 2016			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	Not applicable	During the Reporting Period, the Group did not identify any operations and suppliers that are at significant risk for incidents of forced or compulsory labour.
Respect for human rights and indigenous rights **GRI 103: Management Approach 2016**			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Community Involvement and Public Welfare (98)	
103-2	The management approach and its components	Community Involvement and Public Welfare (98)	
103-3	Evaluation of the management approach		
GRI 411: Rights of Indigenous People 2016			
413-2	Operations with significant actual and potential negative impacts on local communities	Not applicable	During the Reporting Period, the Group did not identify an incidents of violations involving the rights of indigenous peoples.

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
Health and Safety of Customer and Public			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Work Safety and Health (85), Engineering Quality and Supplier Chain (89–90)	
103-2	The management approach and its components	Employment System and Welfare (85), Engineering Quality and Supplier Chain (89–90)	
103-3	Evaluation of the management approach		
GRI 416: Customer Health and Safety 2016			
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Not applicable	During the Reporting Period, the Group incurred 10 fines in 2020 and 2021 for mosquito breeding on-site, in breach of the Public Health and Municipal Services Ordinance in Hong Kong.
Customer Privacy			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Customer Privacy (100)	
103-2	The management approach and its components	Customer Privacy (100)	
103-3	Evaluation of the management approach		
GRI 418: Customer Privacy 2016			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Not applicable	The Group did not receive any complaints concerning breaches of customer privacy and losses of customer data during the Reporting Period.

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
Material issues not covered by the GRI Standards			
Carbon Neutral Construction			
GRI 103: Management approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Carbon Neutral Construction and O•PARK2 (57–69)	
103-2	The management approach and its components	Carbon Neutral Construction and O•PARK2 (57–69)	
103-3	Evaluation of the management approach		
Respond to climate change			
GRI 103: Management approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Response to Climate Change (70–75)	
103-2	The management approach and its components	Response to Climate Change (70–75)	
103-3	Evaluation of the management approach		
Land degradation, pollution and rehabilitation			
GRI 103: Management approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Environmentally Friendly Construction (76, 84)	
103-2	The management approach and its components	Environmentally Friendly Construction (74, 84)	
103-3	Evaluation of the management approach		

GRI Standards Content Index

GRI Standards	Content	Relevant chapter (page number)	Remarks
Promote Suppliers to Go Green			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Engineering Quality and Supply Chain (90)	
103-2	The management approach and its components	Engineering Quality and Supplier Chain (90)	
103-3	Evaluation of the management approach		
Innovative Technologies and Their Applications			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Innovative Technologies and Applications (91–97)	
103-2	The management approach and its components	Innovative Technologies and Applications (91–97)	
103-3	Evaluation of the management approach		
Intellectual Property Rights			
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its Boundary	Material Topics (51–56), Protection of Intellectual Property (101)	
103-2	The management approach and its components	Protection of Intellectual Property (101)	
103-3	Evaluation of the management approach		