



中國建築國際集團有限公司

CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED

Leaping towards a
Sustainable Future

2016

Sustainability Report



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About This Report



Report Objective

China State Construction International Holdings Ltd. (“CSCI” or “the Group”) has issued four stand-alone Annual Corporate Social Responsibility (CSR) Reports since 2014. This is the first Environmental, Social and Governance (ESG) Report by the Group. Progressing from CSR to ESG reports, the Group aims to raise report quality, setting out the Group’s actions and performance on sustainability issues in a more comprehensive and unbiased manner. The report also indicates the Group’s strategies and commitments towards sustainable development with the intention of increasing stakeholders’ confidence in and understanding of the Group.

For CSCI, this report not only serves to review business performance, but also to promote changes in management approach. For this, the Group appointed an independent professional consultant to prepare the report.

Reporting Year

Information in the report reflects the performance of CSCI in environmental stewardship and social responsibility from January 2016 to December 2016. In future, the Group will publish the Environmental, Social and Governance Report on an annual basis and make it available to the public at any time to enhance transparency and accountability.

Reporting Boundary

The report focuses on Hong Kong and the core operations of CSCI in Macau and the PRC, the same scope as the CSR Report 2015. The Group will extend the scope of disclosures and will ultimately cover all operations of the Group when the data collection system is better established and the environmental, social and governance work is strengthened. The KPIs are shown in the report as well as supplemented by explanatory notes to establish benchmarks and facilitate comparison.

Reporting Guideline

The report is published in accordance with the Environmental, Social and Governance Reporting Guide (“ESG Guide”) issued by The Stock Exchange of Hong Kong Limited (“HKEX”). In order to allow readers to have an in-depth understanding of our operations, we have, whenever feasible, covered material topics in a more comprehensive manner with reference to the GRI G4 Sustainability Reporting Guidelines (G4 Guidelines) and the Construction and Real Estate Sector Disclosures. A complete ESG Guide and GRI G4 index is inserted in the last chapter of the report for reference.

With reference to the guidance provided by the International Integrated Reporting Council, the report was prepared in a way that is consistent with our financial report. The report also provides a summary of our financial information, connecting our financial and non-financial performance for stakeholders’ review. The financial information is audited by an independent auditor, PricewaterhouseCoopers. For details, please refer to page 99 of the annual report.

Reporting Principles

In order to present a high quality report to our readers, CSCI has complied with the following key reporting principles

Reporting Principle	Meaning	CSCI's Response
Materiality	The report should cover aspects that reflect significant economic, environmental and social impact or substantively influence the assessments and decisions of stakeholders.	The Group identifies material issues to be addressed through stakeholder engagement, in which the Group's business nature, operational practices and locations have also been taken into account.
Quantitative	The report should disclose key performance indicators in quantitative terms.	Information is presented with quantitative measures whenever feasible.
Balance	The report should present a balanced picture of each of these issues in an objective manner, be they positive or negative, to ensure a comprehensive picture of performance is reasonably reflected.	The report identifies and elaborates both the achievements and the challenges faced by the Group.
Consistency	The report should present information on a consistent basis so that stakeholders can analyse and evaluate changes in performance over time. Any changes in methodologies should be explained.	The Group has compared current and past KPIs and information on different aspects in order to facilitate year-on-year comparisons of the Group's performance.
Reliability	The report should be presented in a manner enabling the stakeholders to have the confidence to check the veracity of its information against the applied reporting principles.	The information contained in the report is clearly presented with no intention to be misleading or deceptive. The Group aspires to conduct carbon assessment and obtain external assurance for future ESG reports.
Completeness	The report should sufficiently cover the chosen material aspects, taking care not to leave out any aspects that are significant to stakeholders.	All aspects in the SEHK ESG Reporting Guide are covered in this report.
Clarity	The report should present the information clearly in a manner that is reasonably understandable and accessible to stakeholders.	The report is written in a manner that is comprehensible to all stakeholders who have a reasonable understanding of the Group and its activities.
Relevance	The report should cover material aspects that reflect significant environmental and social impacts.	The report highlights issues that are significantly impactful to the Group's core business operations and issues that are most concerned by its stakeholders.
Accuracy	The report should present information that is sufficiently accurate and detailed for stakeholders to evaluate the Group's performance.	A rigorous due diligence process is conducted to ensure quality and veracity of information disclosed.

Data Collection

The report includes information from all functional departments at CSCI, including but not limited to the Human Resources Department, the Finance and Treasury Department, the Legal Department, the President's Office, the Corporate Communications Department and related subsidiaries. The Group has established an internal regulatory system and a formal review process to ensure that the information presented in this report is accurate and reliable. The contents of the report were also reviewed by senior management of the Group.

Report Accessibility

The report is written in Traditional Chinese, Simplified Chinese and English, and are uploaded onto the Group's website at www.csci.com.hk. In case of any conflict or inconsistency between the Chinese version and the English version, the Chinese version shall prevail.

Contact Methods

Our continuous improvement relies on your valuable feedback on both the content and the form of this report. If you have any questions or comments, please contact us through the following methods:

China State Construction International Holdings Ltd.

Address: 28th Floor, China Overseas Building, 139 Hennessy Road, Wanchai, Hong Kong

Fax: (852) 2527 6782

Email: csci_csr@cohl.com

About the Group



Company Profile

Setting its footprint into Hong Kong in 1979, China State Construction International Holdings Limited is a vertically integrated construction and investment conglomerate mainly engaged in infrastructure investment, construction projects, as well as building-related operations such as housing project, civil engineering works, foundation works, site investigation, mechanical and electrical engineering, concrete production, prefabricated construction and project supervision services. The Group established its headquarters in Hong Kong, and was listed on the Main Board of The Stock Exchange of Hong Kong Limited (stock code: 3311.HK) in July 2005.

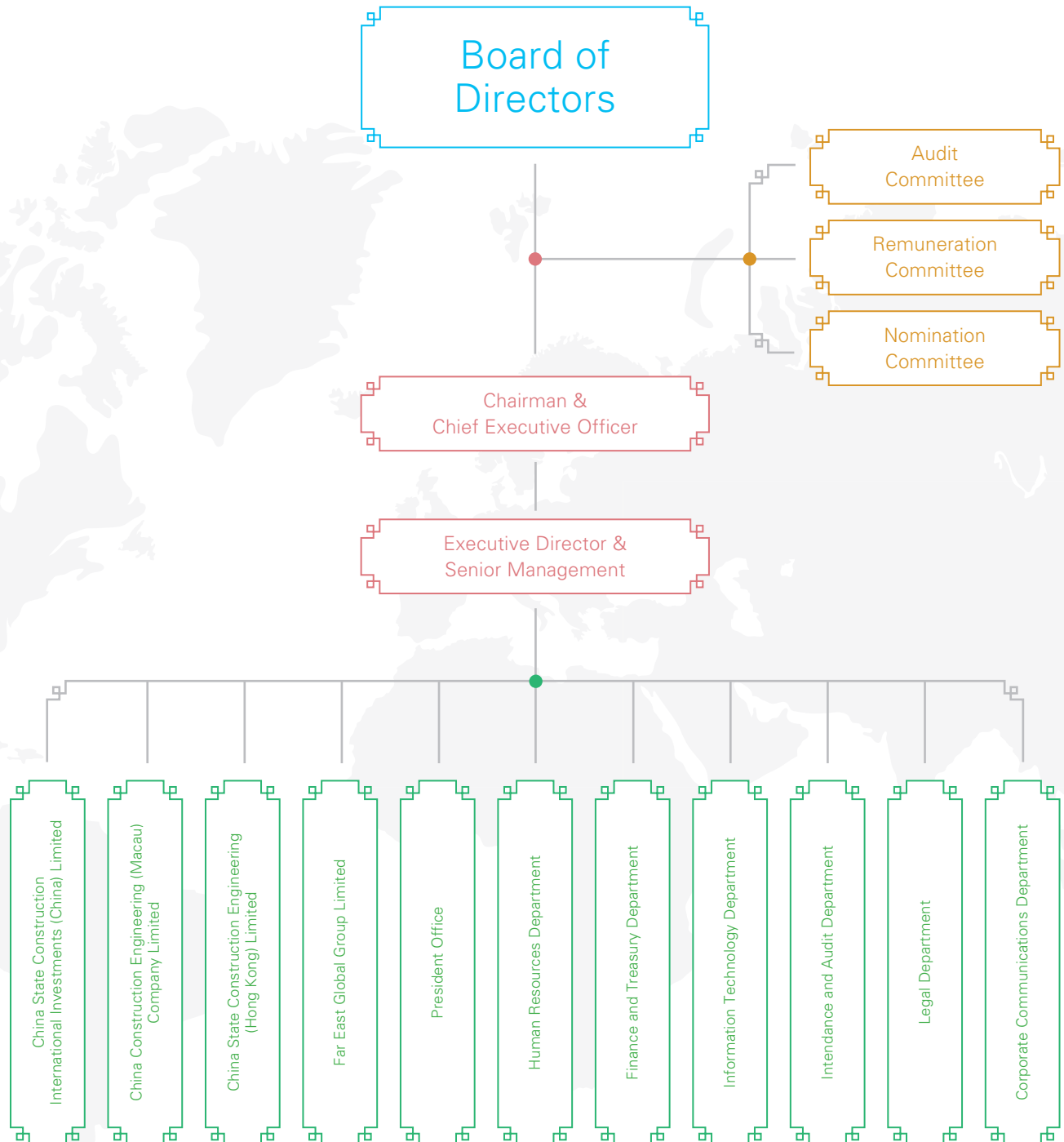
Over a decade, the Group's turnover leapt from HK\$6.86 billion in 2005 to more than HK\$462 billion in 2016 with a compound annual growth rate of 18.9%; net assets jumped from HK\$837 million in 2005 to around HK\$25.67 billion in 2016; net profit increased from HK\$130 million in 2005 to HK\$5,130 million in 2016 with a compound annual growth rate of 39.7% while market capitalisation soared by about 120 times; contract value surged from HK\$5,960 million in 2005 to HK\$249.6 billion in 2016, making an array of remarkable achievements.

Upholding the entrepreneurial spirit of "Integrity, Innovation, Surpass, Win-win situation" through nearly 40 years, CSCI has established four segments in "Mainland China, Hong Kong, Macau and overseas" underpinned by the twin drivers of "infrastructure investment and construction contracting". As at the end of 2016, the Group had established a nationwide presence covering 38 cities in 18 provinces across China, having undertaken over 1,000 contracted projects in Hong Kong, Macau, Mainland China and overseas.

In Hong Kong and Macau, CSCI leverages its outstanding construction and management expertise to undertake construction works, mainly including housing projects such as public and private residences, commercial and industrial housing, medical institutions, educational and cultural facilities, hotels and public constructions; civil engineering projects such as site formation, roads, bridges, reclamation and tunnels; and piling, mechanical and electrical engineering works. As a flagship of infrastructure investment business under China State Construction Engineering Corporation, the Group has been venturing into infrastructure investment business in Mainland China since 2007, with total investments amounting to over HK\$200 billion as at the end of 2016. In March 2012, the Group acquired Far East Global Group Limited (stock code: 830.HK) as a turnover and profit contributor and a flagship for international expansion.

In retrospect, CSCI earned fame in major construction markets by rooting itself in Hong Kong and Macau to enhance construction workflow and improve cost efficiency using a central procurement and distribution system, reputable in major markets of the construction industry. Looking into the future, CSCI will draw upon its extensive management expertise and proven capital operation capacity to, as always, give play to its strengths in high-quality, technology-intensive works in an effort to grow into a world-class and blue-chip construction conglomerate.

Directors and Organisation

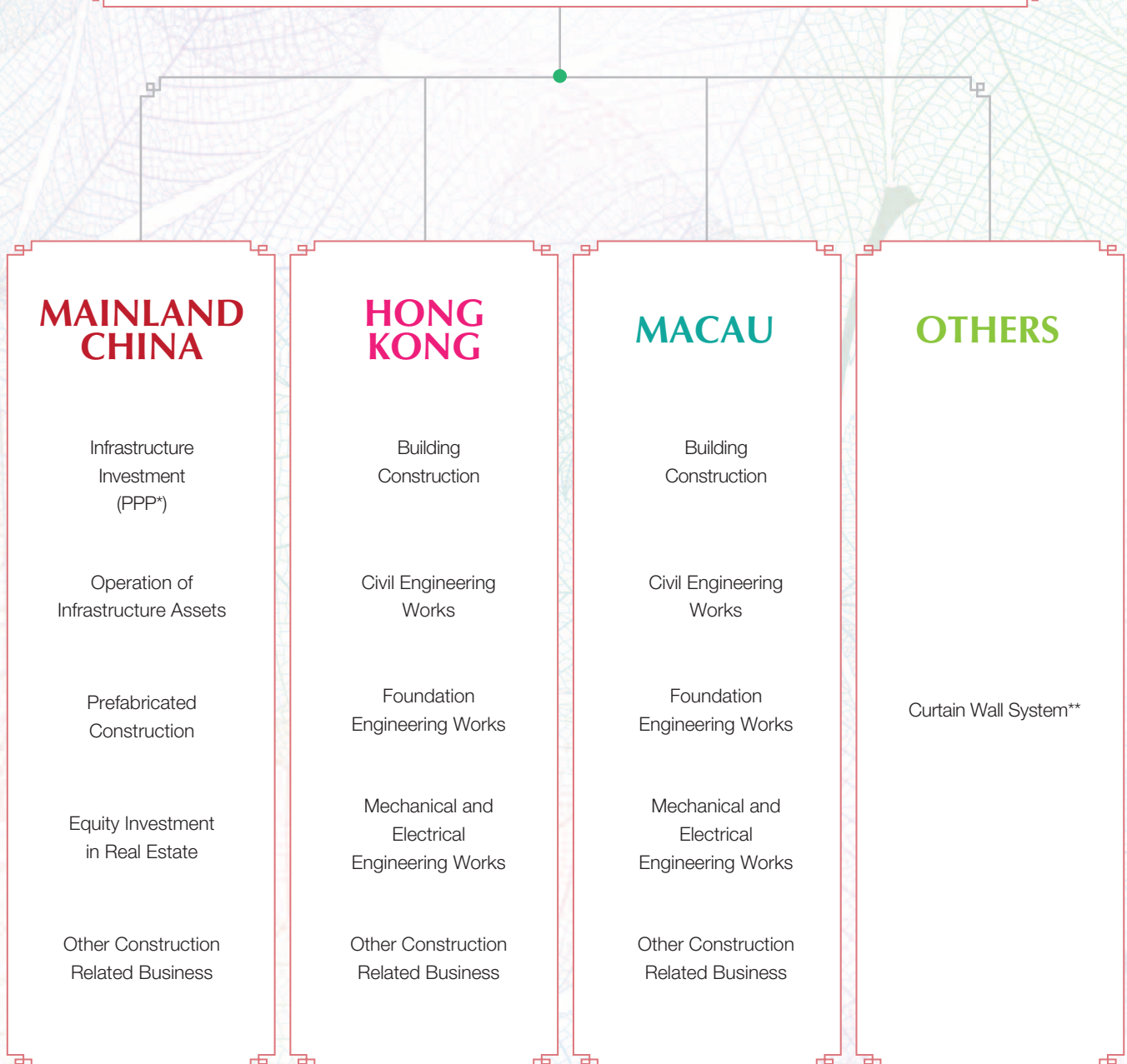


Corporate Structure



中國建築國際集團有限公司

CHINA STATE CONSTRUCTION INTERNATIONAL HOLDINGS LIMITED



* "PPP" – "Public-Private-Partnership"

** Operate through a listed subsidiary, Far East Global Group Limited (Stock Code: 00830)

Summary of Financial Performance in 2016

The Group is mainly engaged in public and private construction in Hong Kong and Macau, and in infrastructure investment projects and construction-related businesses in Mainland China. Far East Global Group Limited and its subsidiaries are mainly engaged in curtain wall business in North America, Hong Kong and Macau.

As at 31 December 2016, **108 projects** were under construction, accounting for a total contract sum of **HK\$249.628 billion**

The Group undertook **55 new projects** in 2016, accounting for a total contract sum of **HK\$83.77 billion**

Turnover reached **HK\$46.208 billion**, with profit attributable to shareholders amounting to **HK\$5.13 billion**, representing a year-on-year increase of **21.6%** and **13.4%** respectively

Net cash inflow from operating activities was recorded for two consecutive years

Direct economic value generated and distributed by the enterprise (HK\$'000)

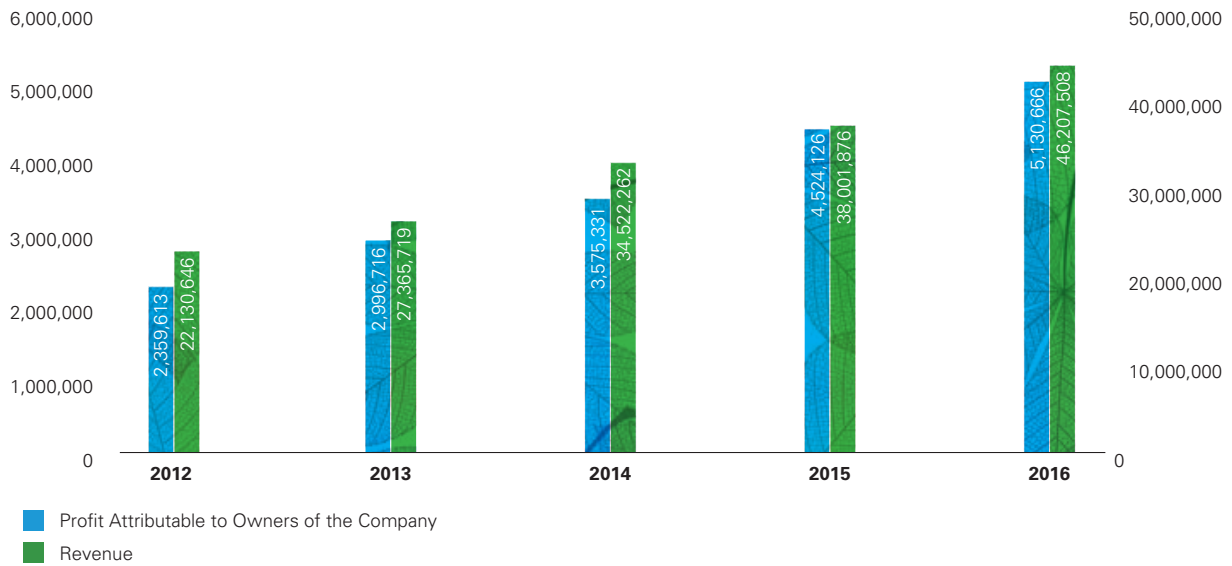
Direct economic value generated	2016	2015	Year-on-year increase (%)
Revenue	46,207,508	38,001,876	22
Profit attributable to shareholders of the Company	5,130,066	4,524,126	13
Economic value distributed			
Costs of construction and sales	40,224,630	32,888,761	22
Administrative, sales and other operating expenses (including charitable donations)	1,106,084	1,007,396	10
Dividends distributed	1,403,358	1,210,310	16
Income tax expenses, net	1,004,504	659,562	52
Charitable donations	625	62	908 ¹

1 The increase was mainly due to the Group's efforts to strengthen the procedures for reporting charitable donation data by its subsidiaries in 2016. The Group will continue to expand the scope of data collection to provide stakeholders with more comprehensive data.

Results

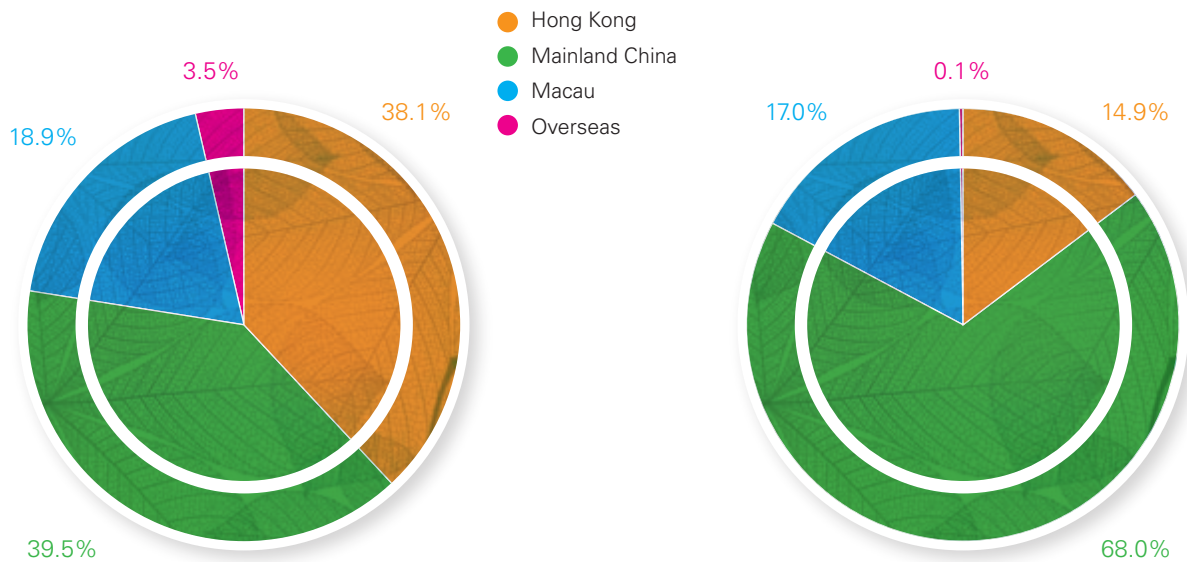
Profit Attributable to Owners of the Company
(HK'000)

Revenue
(HK'000)



Breakdown of Segment Revenue
for the year ended 31 December 2016

Breakdown of Segment Results*
for the year ended 31 December 2016



* Excluding loss of Overseas Segment

For further information on the performance of the Group's business development, please refer to the 2016 annual report of the Group.

Message from the Management

I am delighted to present this first Sustainability Report from the CSCI Group. It marks an important milestone in our journey to sustainability. In the course of preparing this Report, we have gained a deep understanding of the views and expectations from various stakeholders about the Group's environmental, social and financial performance. It has also helped us to identify risks and opportunities related to various issues, and it will facilitate further planning to create the blueprint for our sustainable development.

This year, the Chinese Government promulgated the 13th Five-Year Plan for the National Economic and Social Development of the People's Republic of China, also known as 13th Five-Year Plan. This emphasizes the concept of green development chiefly targeting the improvement of the eco-system as well as the control of resource waste and total carbon emissions. The Five-Year Plan reflects the widespread trend towards a sustainable model of social development. As always, we are firmly convinced that attention to the economy, society and the environment are indispensable foundation stones for corporate sustainability. We have made sustainable development an integral part of our long-term strategic development plan founded on integrity, innovation and pragmatism.

Faced with a sluggish recovery of the global economy and an unbalanced market, the Group has persisted in pursuing a "Dual Core Driving Strategy of Construction Contracting and Infrastructure Investment". During this year, the Group adopted the strategy of "prudent and innovative operations to expand its markets and manage its brand". Seeking innovation while maintaining a steady pace, the Group has successfully grasped development opportunities related to infrastructure investments in Mainland China while protecting its current advantageous position in the construction business in Hong Kong and Macau.

The Group owes its success to all its dedicated staff working diligently behind the scene to accomplish a succession of high quality construction projects. Constantly bearing in mind the well-being of our staff, we strive to provide a safe, well-rewarded, fair and integrated working environment with room for career advancement by means of comprehensive personnel management and optimise resource allocation. Staff and the Group work hand in hand and we grow together. Work safety is our prime responsibility and we try our best to ensure the safety and health of all staff members, sub-contractor workers and the general public through the introduction of an effective management and accountability system as well as the provision of regular safety training and assessment.

As a company with a vision, the Group has long been aware of the importance of attracting young people to join the construction industry for future development. Subsequently, we have organised campus recruitment exercises, as well as engineer trainee and apprenticeship programmes to nurture the engineering professionals of the future and to reserve talents for the Group's continued development. To retain talents, the Group has also rewarded our staff with competitive remuneration and welfare packages and opportunities for the overall development of staff. The performance and career development of every staff member are reviewed on an annual basis. Staff also enjoy the opportunity to participate in training courses on a range of diverse topics. We also attach great importance to staff communications in order to understand the needs and opinions of our staff at all working levels and to create a pleasant atmosphere in the workplace.

We are dedicated to the core value of “Good Quality and Value Creation”. The Group’s approach to quality assurance is “alright for one time, alright for all times”. With the establishment of a quality management system in compliance to ISO 9001, we are committed to provide high quality products and services to our customers. Apart from adopting a rigorous quality assurance system, the Group has also promoted a “four new” policy to maintain a leading position in our sector. This policy involves the use of “new materials” and “new equipment”, as well as the adoption of “new workmanship” and “new technologies”. This year, the Group was awarded a total of 16 patents by the Chinese Government, and four of these were patents for new inventions. Meanwhile, we pro-actively promoted pre-fabricated structures and precision construction. To strengthen quality control and raise craftsmanship quality and efficiency, on-site fitting of prefabricated structures has replaced on-site mixing and filling of cement. In summary, the use of prefabricated structures in the Group’s construction projects in Mainland China has already reached 60% of the total volume of cement being used, making us a champion in the industry both in terms of production technology and material application.

The Group understands that the sustainable management of earth’s resources is crucial to our social and economic development, and corporations play a considerable role in climate change mitigation. Upholding a responsible attitude, the Group has adopted a green management approach at the planning stage of its construction work to increase the efficiency of resource utilisation and to reduce carbon emissions. The Group strives to integrate sustainability into every segment of its operation to make green building a reality. To groom its own professional team for green project management, the Group actively encourages and subsidizes staff to undertake training and achieve the Beam Pro qualification. This year, we were delighted to receive the “Excellence in Responding to Climate Change Enterprise Award” from the Carbon Disclosure Project, a recognition of our outstanding performance in worldwide environmental information disclosure.

Looking ahead, the Group will continue to uphold its corporate spirit of “integrity, innovation, transcendence and mutual benefits”. We will treat sustainable development as the core of the Group’s corporate strategy, strengthen corporate governance and promote green construction as a long-term plan. We are committed to becoming a role model in the industry while maintaining close cooperation with our shareholders, partners, staff and various stakeholders of the community. With one heart and one mind, we look forward to building a better community together.

Zhou Yong

Executive Director, Chairman and Chief Executive Officer

China State Construction International Holdings Limited



Sustainability Management Strategy



Management Structure

CSCI established a corporate social responsibility reporting committee in 2013 to coordinate corporate social responsibility management practices across the Group. The committee consists of the Group's Executive Director and Financial Controller as the chairman and department heads and representatives of its subsidiaries as the members, with a view to ensuring that the committee may fully understand the overall social responsibility affairs and has adequate decision-making and executive powers.

The committee held two meetings during the year and decided to upgrade the Group's Corporate Social Responsibility Report to Sustainability Report this year. In doing so, the committee not only aims to upgrade the reporting standards, but also expects to deeply integrate the sustainability agenda into business operations, and to identify and manage the risks and opportunities posed by the sustainability agenda when preparing the Sustainability Report.

Management Philosophy

The Group always pursues its core value of "Good Quality and Value Creation". As an environmentally and socially responsible construction company, the Group commits itself to ensuring sustainable development in all business flows through a well-established management system.

We are committed to investing necessary resources to develop a more comprehensive and far-sighted sustainable development blueprint based on our existing integrated management framework, and we closely align ourselves with the relevant national policies, so as to contribute to global sustainable development.



The 2030 Sustainable Development Agenda, as unanimously adopted by 193 UN member states, includes 17 sustainability goals. Over the next 15 years, UN member states will work together to eradicate poverty, achieve equality and combat climate change.

Corporate Governance System

Good corporate governance is the key to sustainable development of the Group. We adhere to the business philosophy of “Good Quality and Value Creation” and are committed to building up a sound corporate governance system that covers the risk management and internal control system and the integrity mechanism, in an effort to achieve integrated management.



Corporate Governance

The Group strives to maintain efficient and transparent corporate governance in strict compliance with laws and regulations, and to operate in conformity to business ethics and corporate culture.



Risk Management and Internal Control System

The Board of Directors is responsible for overseeing the management’s planning, implementation and monitoring of the risk management and internal control systems.

The Group set up the audit department to audit financial management, business operation and internal control of each business segment. The audit department is independent of all business segments and directly reports to the Chief Executive Officer.

Each business unit is required to develop its applicable risk management and internal control systems based on the local business environment, and to review and assess the effectiveness of such systems on a continuous basis.

The Group shall, at least annually, review the effectiveness of its risk management and internal control systems and update the systems.



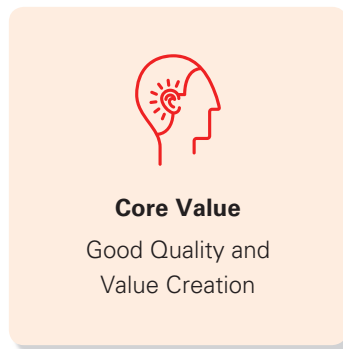
Integrity Mechanism

Senior management members of the Group are required to sign the Clean Governance Responsibility Undertaking to take responsibility for fighting corruption and graft within their respective terms of reference.

The Group has stated in its Employees’ Handbook that no benefit shall be solicited from or offered to any person by any employee. Our subsidiaries also have clear and specific guidelines by business nature in their respective codes of conduct for employees.

During the year, the Group conducted 12 training sessions on anti-graft regulations governing the construction industry for all new employees (nearly 400 in total) of its construction operations at the headquarters and in Hong Kong. The Group also strengthened publicity of the educational guidelines on integrity and risk prevention formulated by its parent COHL.

During the reporting period, the Group discovered no corruption case.



Integrated Management

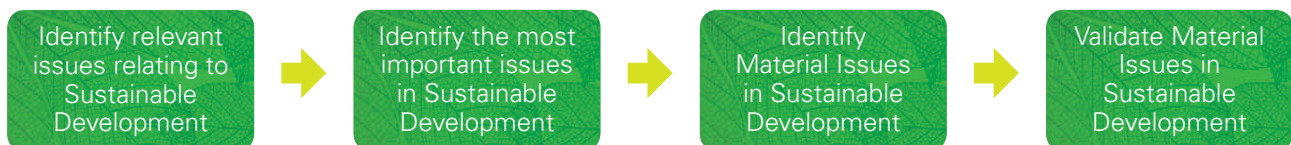
The Group has established the “5+3” integrated project management model which is designed to manage five construction factors (safety, the environment, quality, progress and costs) through three systems (flow assurance system, process assurance system and responsibility assurance system); and on this basis, formulated relevant policies and work guidelines.

Stakeholder Communication and Material Issues

CSCI places great importance on stakeholder participation, which is considered an indispensable part of the Group's commitment to enhance its sustainable development. In its daily operation, the Group has always maintained open communication with internal and external stakeholders through various channels.

Stakeholders refer to groups or individuals who have a significant impact on or may be impacted by the Group's business. The Group's stakeholders include not only its internal staff, the management and directors, but also external clients, business associates, investors, regulatory bodies, and various community groups. To fully harness the report as an efficient tool for information exchange, the Group welcomes feedback from its stakeholders on the information disclosed and commits to provide timely responses to stakeholder opinions.

CSCI believes that stakeholder communication is a dynamic process that should continuously deepen. The Group has commissioned an independent consultant, Carbon Care Asia ("the consultant"), to facilitate stakeholder communication in a fair and impartial manner for a thorough understanding of various stakeholders' opinions and expectations on the Group's sustainable growth. The Group's stakeholder communication for this report involved four main steps:



Step One: Identify relevant issues in Sustainable Development

With the help of the consultant, CSCI conducted a comprehensive review and revision of the Group's list of relevant sustainable development issues to ensure that these issues fully reflect the nature of the Group's business and take account of issues raised in previous communication with stakeholders. In addition, the consultant has conducted interviews with the Group's senior management representatives to help the Group establish its positioning in sustainable development and discuss its vision, goals and plans for future actions promoting sustainable development. The results of the discussions have been incorporated into the list of issues, so that stakeholders can take part in the planning of the Group's sustainable development blueprint.

The Group has identified 37 issues that are most closely related to its business and impact. These issues — spanning the five realms of 'economic performance', 'environmental protection', 'employment and labour standards', 'operational practices' and 'community investment' — have provided the basis for this round of communication with internal and external stakeholders.

Step Two: Identify the most important issues in Sustainable Development

To gauge stakeholders' opinions on and expectations for CSCI's sustainable development performance more effectively, the consultant has designed bespoke communication exercises for stakeholders from different sectors, namely, an "internal stakeholders training workshop" and an "external stakeholders focus group discussions". These communication exercises were carried out in a relaxed and interactive manner. All discussions were kept anonymous to ensure that the participants could freely and frankly express their views on and expectations for the Group.

Internal Stakeholders Training Workshop



Integrating the workshop into the needs of internal training, the consultant provided additional training contents related to sustainable development to deepen internal stakeholders' understanding of various issues in sustainable development. Staff members from various departments took part in this workshop, including those from the Project Management, Investment and Development, Finance, Human Resources, Administration and Public Relations, Information Management and Legal departments.

External Stakeholders Focus Group Discussions

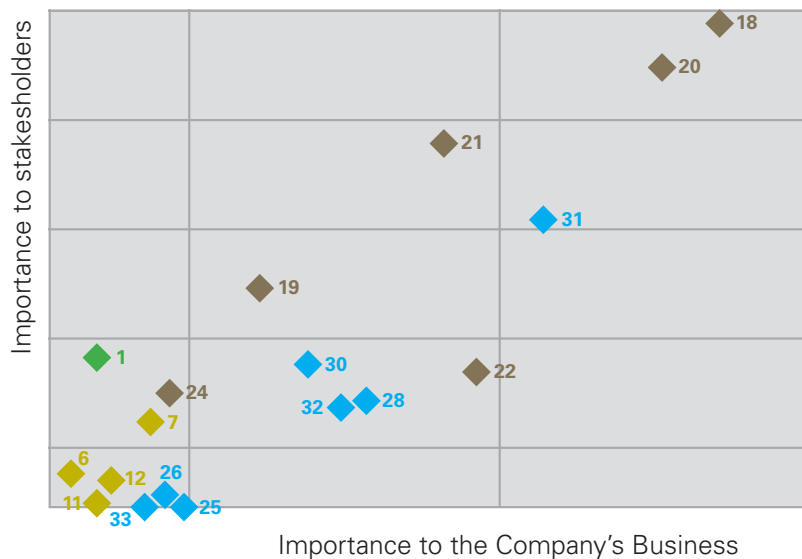
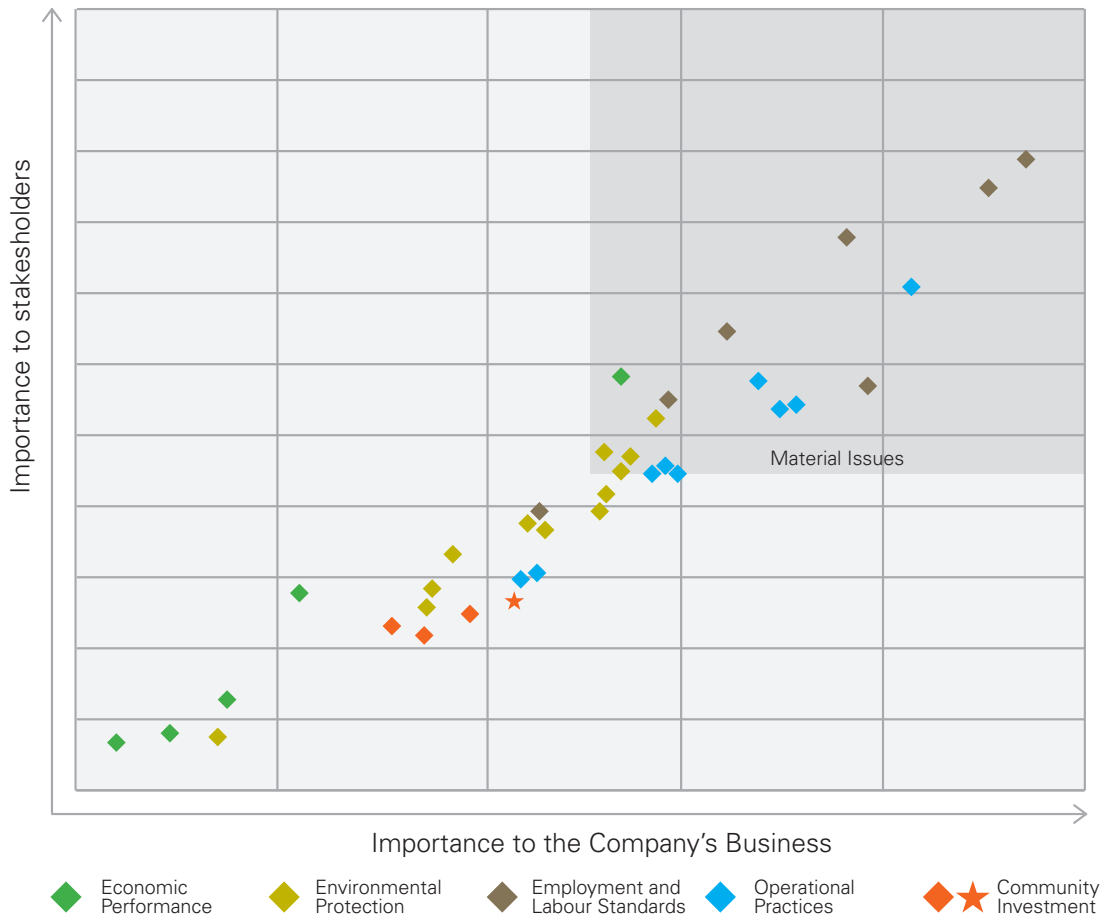


External stakeholders participating in these group discussions included various partners of the Group, including suppliers, contractors, project consultants, human resources consultants, banks, financial institutions and investment institutions.



Step Three: Identify materiality Issues

To further gauge the views of staff from various departments and job levels on CSCI's sustainable development performance, the Group invited the management, executive and junior staff members from different departments to rate relevant sustainable development issues through online surveys. A total of 622 valid surveys were collected. The consultant conducted a materiality assessment analysis and identified 18 key issues. In the materiality matrix below, the materiality issues of the Group are highlighted in yellow.



Step Four: Validate material issues in Sustainable Development

Based on the results of stakeholders' opinions and materiality assessment, the consultant submitted a report to CSCI's Corporate Social Report Editorial Committee to facilitate the Committee's further discussion on the material issues to be included in the *Sustainability Report*, as well as the key issues on enhancing the Group's future performance in sustainable development.

When comparing the results of this exercise with previous communication with stakeholders, CSCI is aware that the issue of highest concern from stakeholders at large has clearly shifted from "economic performance" to the two key areas of "employment and labour standards" and "operational practices". In response to this shift, the Group has stepped up disclosure in this report on these aspects of the Group's work and performance.

To analyse stakeholders' opinions in a more comprehensive manner, the consultant has also conducted independent analysis of the five key aspects individually. The issue found to be of greatest concern from the perspective of both business development and the stakeholders is the same. This finding reflects that the Group's management approach to sustainable development is in line with stakeholder expectations. Although the stakeholders did not express any particular concern on "community investment", the Committee feels that as a responsible corporate citizen, the Group needs to pay greater attention to its impact on the community. Hence, the Committee has incorporated 'understanding the needs of the communities in which the Group operates and ensuring its business activities take community interests into account' into the key reporting areas of this report. The 19 "key issues of sustainable development" identified are listed below, in their order of importance from high to low:

Economic Performance	Employment and Labour Standards
<p>1 Increase income and reduce operational expenses</p>	<p>18 Formulate a comprehensive employment management system</p> <p>20 Provide a healthy and safe working environment to protect staff from occupational hazards</p> <p>21 Provide development and training opportunities for staff and support their sustainable growth</p> <p>22 Prevent child labour and forced labour</p> <p>19 Eradicate discrimination and promote equal opportunities in the workplace</p> <p>24 Establish effective employment and appeal mechanisms for the workforce.</p>
Environmental Protection	Operational Practices
<p>7 Reduce and properly process waste water and refuse</p> <p>12 Conserve water and enhance water use efficiency</p> <p>6 Reduce and properly tackle air pollutants and greenhouse gas emissions</p> <p>11 Conserve energy and enhance energy efficiency</p>	<p>31 Prevent bribery, blackmail, fraud and money-laundering</p> <p>30 Protect the privacy of client information</p> <p>28 Provide satisfactory products and services to clients and safeguard their health and safety</p> <p>32 Prevent anti-competitive conduct</p> <p>25 Ensure all business associates are treated fairly and reasonably</p> <p>26 Evaluate and monitor the supply chain to manage environmental, labour and operational risks</p> <p>33 Establish effective appeal mechanisms for operational management</p>
Community Investment	
<p>★ Understand the needs of the communities in which the Group operates and ensure that its business activities take community interests into account</p>	

Note: This year's stakeholder communication has not set aside compliance as a separate area for discussion. Instead, it raised compliance-related issues in each of the five areas — "economic performance", "environmental protection", "employment and labour practices", "operational practices" and "community investment" — in order to understand more specifically stakeholders' opinions and expectations on the Group's compliance with laws and regulations on various issues.

Apart from identifying materiality issues, the Group has also responded to respective items or opinions that are of particular concern to stakeholders and provided further elaboration in respective chapters of the report to provide a timely response to stakeholder requests.

Stakeholder Concerns and the Group's Response

Area	Most Important Issues for the Group's Business and Stakeholders	Response from China State Construction International
Employment and Labour Practices	Establish a Comprehensive Employment Management System	The Group will formulate a set of Career Development Plan to show clear career development paths for its staff and establish mechanisms for healthy and structured talent cultivation, staff incentives and promotion. In future, the Group will boost publicity to attract greater interest from young people in joining the construction industry.
Operational Practices	Prevent bribery, blackmail, fraud and money-laundering	<p>The Group has set up a regulatory auditing department for internal monitoring and anti-corruption work, which directly reports to the CEO in order to ensure independence. In addition, the Group has introduced corruption risk assessments and begun work to educate all staff with a view to build a corruption-free corporate culture.</p> <p>The Group encourages employees to report any irregularities to the human resources department. The head of the human resources department shall report to the general manager and the chairman to ensure that all cases are properly handled. The Group will formulate the relevant administrative measures for reporting and strengthen reporting channels in the coming year.</p>
Environmental Protection	Reduce and properly process waste water and refuse	Last year, the Group revised its <i>Environmental Management Handbook</i> , <i>Environmental Management Internal Audit Procedures</i> and " <i>Environmental Management Procedures</i> " according to the ISO 14001:2015 environmental management standard guidelines. These revised procedural guides specify that the Group must consider and properly manage the impact of the life cycle of its projects on the environment. In addition, the Group has taken the initiative to use more prefabricated components and recycled materials to reduce material wastage and construction waste.

Economic Performance	Increase income and reduce operational expenses	With experience accumulated over the years, the Group has successfully established a solid economic foundation. Going forward, the Group will continue to strengthen corporate governance, especially in terms of risk management on environmental and social issues, to get better prepared for the risks and opportunities associated with sustainable development.
Community Investment	Understand the needs of the communities in which the Group operates and ensure that its business activities take community interests into account	The Group fully accepts the close relationship between its projects and the lives of local residents and the local economy. In future, the Group will be more proactively engaged in project planning and resource investment for community consultation, so as to gather residents' opinions and deepen their understanding of specific projects. The Group will also proactively take part in community activities in its business locations, and create shared value by establishing long-term collaboration with local communities.

CSCI places great importance on stakeholder communication, with a view to reinforcing a constructive dialogue with its stakeholders based on fostering close cooperation and building mutual trust. In addition to regular communication, the Group will launch a six-year programme for strategic stakeholder communication, under which an independent consultancy will be commissioned to select various stakeholder groups in different phases for regular dialog on the Group's work and achievements in environmental, social and governance aspects. There will also be in-depth communication regarding the contents of the reports every two years, so as to gather the latest opinions from various stakeholders on the Group's sustainable development. Alongside this, workshops will be organized from time to time for stakeholders to gain a better understanding of the Group's efforts in promoting sustainable development, and to take part in discussions about the challenges faced by the Group and the role of various stakeholders in related issues.

CSCI and Talents

CSCI is convinced that employees are the key factor for the success of an enterprise. We treat all employees not only as the most valuable assets of the Group, but also the most intimate and reliable partners of the Group in promoting sustainable development. Through establishing a comprehensive employment management system, we provide employees with a competitive, attractive, fair and inclusive working environment. We make every effort to let all employees fully unleash their value, and create a workplace where employees feel satisfied and lighthearted.

As at the end of 2016, the Group had a total of 11,084 employees (excluding employees of associates) globally, similar to that of the previous year; including 5,226 in Hong Kong and Macau, 5,351 in the Mainland and 507 in overseas areas.

Number of employees in 2016 by region, employee category, age and gender

Region	Employee category	30 or below	31-40	41-50	51 or above	Male	Female	Total number of employees by region
Hong Kong	Senior	0	4	19	17	40	0	4,573
	Middle	1	14	22	22	48	11	
	Executive	57	64	87	72	265	15	
	General	1,119	946	997	1,132	3,184	1,010	
	Total number of employees in Hong Kong by age or gender	1,177	1,028	1,125	1,243	3,537	1,036	
Macau	Senior	0	1	0	0	1	0	653
	Middle	0	1	3	6	9	1	
	Executive	22	16	31	26	93	2	
	General	205	141	95	106	447	100	
	Total number of employees in Macau by age or gender	227	159	129	138	550	103	
Mainland China	Senior	0	14	12	9	36	0	5,351
	Middle	1	43	44	15	96	7	
	Executive	96	215	138	47	438	58	
	General	2,261	1,178	981	297	3,871	845	
	Total number of employees in Mainland China by age or gender	2,358	1,450	1,175	368	4,441	910	
Overseas	Senior	0	0	1	1	2	0	507
	Middle	0	2	2	1	5	0	
	Executive	3	3	2	3	9	2	
	General	129	197	129	34	419	70	
	Total number of employees in overseas by age or gender	132	202	134	39	435	72	
Total number of employees by age or gender		3,894	2,839	2,563	1,788	8,963	2,121	11,084

Number of employee turnovers in 2016 by region, age and gender

By region	Number of employee turnovers	Percentage of that type of employees
Hong Kong	1,480	32%
Macau	101	15%
Mainland China	1,007	19%
Overseas	48	9%
By age		
30 or below	1,061	27%
31-40	612	22%
41-50	574	22%
51 or above	389	22%
By gender		
Male	2,202	25%
Female	434	20%
Total number of employee turnovers and ratio	2,636	24%

Number of new employees in 2016 by region, age and gender

By region	Number of new employees	Percentage of that type of employees
Hong Kong	2,246	49%
Macau	191	29%
Mainland China	1,292	24%
Overseas	43	8%
By age		
30 or below	1,620	42%
31-40	804	28%
41-50	752	29%
51 or above	596	33%
By gender		
Male	3,019	34%
Female	753	36%
Total number of new employees and ratio	3,772	34%

Recruiting and Retaining Outstanding Talents

We cherish and care for our employees, and attract outstanding talents to join our workforce through establishing a comprehensive human development system so that our workforce can thrive and grow from strength to strength. The Group strictly abides by the relevant employment laws of the regions where it operates, and regularly conducts industrial benchmarking evaluation and salary surveys for adjusting our remuneration level in a timely manner. Meanwhile, we also offer an array of benefits on top of those required by laws in the light of the actual circumstances in various regions to cater for the personal needs of our employees and care for their physical and psychological development.

Working environment	<ul style="list-style-type: none"> • Provide site workers with shower rooms and common rooms
Benefits	<ul style="list-style-type: none"> • Provide meal allowance, business trip allowance, overtime compensation leave, wedding cash gift, birthday cake voucher and medical care
Physical and psychological development of employees	<ul style="list-style-type: none"> • Regularly hosting various sports activities, booking sports venues for employees • Hosting major cultural or sports events • Conducting training courses such as emotional management and communication and presentation
Lifetime career planning	<ul style="list-style-type: none"> • Long service award

The Group is committed to promoting the development of local talents, with local employees accounting for nearly 90% of our total workforce. In 2016, we continued to strengthen local recruitment in various regions and selected suitable fresh graduates through recruitment activities, lectures and employment fairs in universities.

Construction projects involve different areas of expertise, with a growing demand for talents possessing the relevant skills and knowledge. Confronted with shortage of talents, the Group has long been aware of the importance of attracting the younger generation to join the construction industry. In addition to conducting the Apprenticeship Scheme since 2009 on a continual basis to cultivate students of the Hong Kong Construction Industry Council Training Academy as the future professional engineering personnel of the Group, the Group has also provided students with training and employment opportunities through the Graduate Engineer Training Programme and Internship Scheme for Higher Diploma Students.

Graduate Engineer Training Scheme

CSCI has hosted the Graduate Engineer Training Scheme since 1997 to cultivate civil engineering, building services engineering or mechanical and electrical engineering graduates who are interested in pursuing a career in the construction industry and becoming professional engineering personnel and future management personnel of the Group. The scheme is an approved scheme of The Hong Kong Institution of Engineers. After completing the scheme and accumulating relevant experience, engineer trainees can participate in assessment examinations of professional bodies and become registered engineers. To date, over 200 engineer trainees have joined the Group through the scheme, with many of them promoted to senior positions in the Group.

Supervision
interviews



Each engineer trainee is guided by a senior management personnel and an immediate site supervisor with extensive frontline management experience

The human resources department regularly communicates with the engineer trainees to understand their personal development plans

Project management
practices



Engineer trainees are posted to the tendering department, or deployed to consultancy companies for internship, so that they can accumulative experience in tendering, design and other aspects

Thematic training
projects



The Group provides leave and allowance for pursuing continuing education to encourage engineer trainees to participate in external training

Engineer trainees participate in a series of thematic training courses and regularly participate in site visits

Engineer trainees are required to participate in training and development for four years, and accumulate frontline management experience and knowledge:

Testimony of an Engineer Trainee

In the first year of my career, I was assigned to the design team of the western section of the Central-Wan Chai Bypass and participated in the design of temporary works, including small pedestrian bridge, workers' rest pavilion and street fences. The process from sketch to finished product on the site took at least one to two weeks, but it brought me a strong sense of accomplishment and helped me understand the entire construction process.

In the second year, I concentrated on frontline work on the site, such as keeping records of the number of machines and workers, ordering materials, and learning construction steps on-site. This helped me effectively manage machinery, manpower and time, which is essential for me to estimate construction periods and control costs in the future. In addition, through communication with the experienced foreman and workers on the site, I came to understand the actual construction difficulties and got first-hand experience of the potential discrepancy between drawings and actual construction.

In my third year, the Group deployed me to accumulate design experience in a consultancy firm. That year, I learned to understand engineering from a different perspective. When looking at the construction plans, which I previously thought were unalterable, in a different role, I found that there was in fact room for discussion in their interpretation. I came to understand the underlying concepts and learned how to communicate with the architects, such that in case of any discrepancy between drawings and actual construction, I find it easier to get the best of both worlds.

Now in the fourth year, I began to play the role of a coordinator. Combining with the knowledge I acquired before, I learned that the design in a construction plan can be adapted to create a plan more suitable for on-site construction. As such, I can perceive the potential problems and then consult the client and the architect in advance to work out a better plan for the project to run more smoothly.

Looking back over the past years, I have accumulated much valuable experience from the training scheme in the first three years, which helped me combine expertise and become versed in the field and thus arrange site workflows efficiently in the fourth year.

Chan Nga Sze, Ada
Civil Engineer Trainee



Internship Scheme for Higher Diploma Students

In recent years, the Group took an active part in the Student Industrial Attachment Programme of the Vocational Training Council (VTC) by providing a learning and practice platform for students and guiding them in planning their careers. During the internship, the Group deployed professional engineers to serve as mentors of the students by guiding them in their work and establishing research subjects of their graduation theses, and to collaborate with VTC's internship coordinator and the human resources department to follow up on the learning progress of the interns. Since its participation in the programme, the Group has trained over 100 higher diploma interns, including those in the building construction, civil engineering, building services, quantity surveying disciplines. More than half of the interns were retained by the Group to serve as frontline engineering staff after completing their internship.

The Group's salary system is closely linked with the individual performance of employees. We adopt a responsibility system for operational and management objectives, and have developed systematic business indicators as an important basis for annual performance and career development assessment. During the year, more than 96% of the employees received performance and career development assessment. We also gave recognition to and reward employees for their contributions with various incentives such as the Integrated Site Management Award and Technology Innovation Award.

The Group believes that good communication will help enhance the employees' sense of belonging, boost work morale and create a harmonious workplace. We pay great attention to communication between the management and employees at all levels. The Group maintains regular communication with employees through overall progress reporting and performance and career development assessment. We also encourage employees at all levels to contribute valuable insights on the Group's business operations and corporate culture via various channels to their respective superiors, the person-in-charge or the human resources departments of their respective entities or the officers-in-charge at all levels.

Prevention of Child Labour and Forced Labour

The Group has established a set of procedures to prevent employment of child labour or forced labour through rigorous reviewing the personal information of job candidates and clearly explaining the employment conditions to them. Meanwhile, we are well aware of the Group's responsibility to monitor the compliance of sub-contractors in their employment of construction workers, and to have personnel responsible for labour relations on each site to check the identities of workers via an electronic access control system, in order to ensure that each worker meets the statutory requirements for on-site construction. In 2016, no case of non-compliance regarding child labour or forced labour occurred within the Group.

In the coming year, we plan to conduct internal research and discussion on management and measures relating to prohibition of employment of child labour and forced labour, and establish the policies of the Group and provide employees with relevant training in light of the human rights policy of the UN Global Compact.



The International Labour Organization set 2016 as the deadline for eliminating the worst forms of child labour. According to the report on progress against child labour issued by the organization last year, despite the substantial reduction in the total number of child labour in the past decade, the number of child labour in the world still stood at 168 million in 2012, more than 50% of whom were engaged in dangerous work in various industries, including the construction industry.

Protection of Employees' Health and Safety

Employees are the most valuable assets of the Group, but they are often involved in high-risk work procedures due to the nature of construction works. We give top priority to safeguarding the safety and health of each employee and have developed a set of comprehensive construction safety and health management measures, covering specific safety guidelines, reward and penalty and management accountability mechanisms, training courses and regular safety inspections, with a view to preventing accidents, eliminating serious incidents and staying clear of prosecution due to non-compliance and reducing the incidence of occupational injury. In addition, the Group has health check-up services to take care of its workers by providing new employees and those engaged in highly risky work with regular physical check-up services.

In 2016, we safeguarded the safety and health of all employees and sub-contractors by improving the safety management system, providing safety training and equipment and strengthening safety communication.

Improvement of Safety Management System

The Group has developed the Safety and Health Management Policy, and formulated over 20 sets of specific work guidelines according to varying scopes and procedures of construction, in an effort to guarantee the safety and health of all employees, sub-contractors and the people affected by the relevant construction works. During the reporting year, the Group formulated guidelines such as the Guidelines on Transport Vehicles and Traffic Safety on Construction Sites, the Guidelines on Safety Management of Construction Sites and Burrows, the Guidelines on Erection and Criteria of Construction Site Fences and the Guidelines on Safety Management of Combustible Materials on Construction Sites, and distributed the Manual on Safety Management of Construction Site Cranes and the Manual on Safe Operation of Construction Site Cranes at each construction site.

In addition, the Group carried out various forms of intensive safety inspections. During the year, we conducted over 1,100 inspections of various types in Hong Kong, including inspections on high-risk construction sites, inspections on high-risk work procedures, surprise safety and environmental inspections at night, internal integrated management and special inspections on lifting machinery and electricity at construction sites.

Safety Training and Communication



Frontline managers

In addition to regular training, the Group developed a mobile app for the first time to enable the safety and environmental managers at construction sites to check all the safety management measures as well as relevant guidelines, notices and normative documents anytime and anywhere they want. To promote the mobile app, we provided training on how to download and use the app for more than 100 safety managers during the year.



Persons-in-charge of sub-contractors

During the year, the Group hosted two major safety advocacy activities to train the persons-in-charge of sub-contractors on key safety issues. The training sessions were conducted by themes, such as high-altitude operations, mechanical lifting and use of electricity at construction sites.



Workers

In 2016, the Group launched the "100-Day Special Campaign for Safe Production of Infrastructure" to carry out safety hazard clearance, emergency drills, special training, safety advocacy and other related activities on the construction sites.



New staff at construction sites

During the reporting year, the Group provided all new employees at construction sites with safety and health training, which covered the Group's safety and health policy, organisational structure for construction site safety, safety code of conduct for construction site employees, engineering characteristics and potential hazards, emergency response procedures and other relevant guidelines on safety management.

Safety Management Performance of the Group in 2016

Each year, the Group develops safety and health objectives and guidelines and reviews its management system and the Safety and Health Management Policy. In 2016, persons-in-charge of our 50 construction sites signed the 2016 Responsibility Undertaking on Management of Safety Production on Construction Sites, thereby pledging to strengthen safety management and ensuring no serious incidents and prosecution against non-compliance incidents on the construction sites. As a result, we achieved the annual target accident rate per thousand persons of below 8.8. Furthermore, we introduced a new quarterly monitoring system for safety production at construction sites with a quarterly target accident rate per thousand persons of below 2.2 during the year, and held review meetings with the persons-in-charge of any construction sites failing to achieve such target.

To further monitor the safety and health performance of the Company and its construction sites, the Group also conducts internal and external safety audits every six months. In 2016, the average safety score of the Group's integrated management review reached 90.8 points, higher than that of the previous year. China State Construction Engineering (Hong Kong), China Overseas Building Construction, China State Mechanical & Electrical Engineering and Alchmex International Construction passed the external audit under the OHSAS 18001 Safety Management System performed by the Hong Kong Quality Assurance Agency. In 2016, the Group recorded a total of 22 work-related injuries but no work-related fatalities. The annual accident rate per thousand persons was only 1.98, well below the Group's target of 8.8 and much lower than the average level of Hong Kong's construction industry.

The Group's work-related injury rate per 1,000 persons by region and gender

Region	Gender	Number of work-related injuries	Number of fatalities	Work-related injury rate per 1,000 persons
Hong Kong	Male	8	0	2.26
	Female	1	0	0.97
Macau	Male	4	0	7.27
	Female	0	0	0
Mainland China	Male	9	0	2.03
	Female	0	0	0
Overseas	Male	0	0	0
	Female	0	0	0
Total number of work-related injuries		22	0	1.98

New goals for 2017

Improve the divisional responsibility system for frontline managers for clear division of responsibility, and implement the reward and penalty mechanism

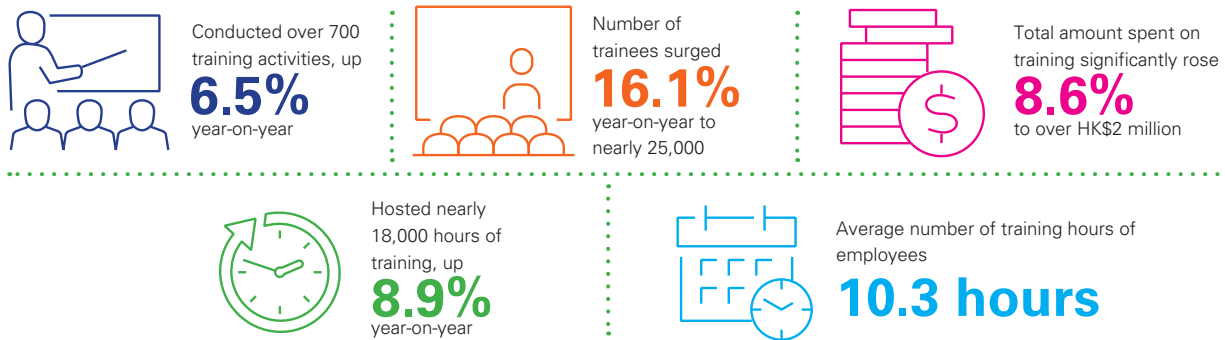
Constantly improve the Group's safety and environmental management systems and formulate safety management guidelines regarding lifting machinery, roof cranes, etc.

Strengthen management over the persons-in-charge of sub-contractors and implement the accountability mechanism

Strictly implement the safety production responsibility system, supervise quarterly implementation of construction site safety targets, and hold accountable the persons-in-charge of any construction site failing to achieve the targets

Expanding Employees' Latitude for Development

We have been attaching importance to talent development and let every employee fully unleash their potential and gain satisfaction from their work with sustainable improvement. The Group hosted various internal training sessions during the year and offered allowance to employees for participating in external training courses to enhance their expertise and help boost the overall efficiency of the Group through better personal work performance.



Average number of training hours of employees by employee category and gender

Region	Employee category	Average number of training hours of male employees	Percentage of male employees trained	Average number of training hours of female employees	Percentage of female employees trained
Hong Kong	Senior	13.7	100%	N/A	N/A
	Middle	13.1	98%	3.6	82%
	Executive	21.2	90%	16.1	100%
	General	4.7	52%	1.9	26%
Macau	Senior	32	100%	N/A	N/A
	Middle	10.3	100%	19	100%
	Executive	5.1	95%	6.5	100%
	General	4.4	96%	4.5	98%
Mainland China	Senior	5.9	94%	N/A	N/A
	Middle	15.2	89%	38	86%
	Executive	22.3	95%	31.3	79%
	General	16.3	77%	11.9	81%
Overseas	Senior	0	0%	N/A	N/A
	Middle	0	0%	N/A	N/A
	Executive	3.1	0%	0	0%
	General	0.5	0%	0	0%

To closely follow the long-term development strategies, the Group has set out clear employee training guidelines covering a wide range of appropriate courses. Regular training and thematic courses mainly focus on two major areas, namely “business structure” and “professional and management series”, which involve engineering technologies, management of quality, safety and the environment, contract negotiation, enhancement of communication skills and leadership skills. In 2016, we continued to develop various management courses proactively for employees of different professions and ranks, covering business expansion, organisational development, management enhancement, as well as project investment and development, enhancement of corporate organisational capability, investment and management courses under the new business model, integrated corporate and site management courses. The Group offered training to nearly 70% of its employees during the year. However, we understand that the number of general employees in Hong Kong and employees in overseas areas who had participated in training and their number of training hours were significantly less than those of other ranks and regions. The Group will step up its efforts in the relevant area in the coming year to ensure that all employees are offered appropriate training.

Provision of a wide range of appropriate training courses



Senior management personnel

Enhancement of organisational capability, building and managing high performance teams
Project investment and development
Financial budgets and risk management
Public relations training



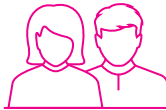
Middle management personnel

Management and communication skills
Skills enhancement for middle management personnel
Investment contract management, taxation management



Executives management

Management and communication skills
Enhancement of core occupational capability
Project management, investment evaluation
Construction technology and construction organisation and planning



General staff

Expertise training (project technology, quality, safety and environment management, logistics management, machinery management, etc.)
Training series for engineer trainees under the integrated site management training courses
Career planning for outstanding employees
Labour management skills training at sites
Communication skills

Resources commitment



Strengthening internal lecturer teams

A team of nearly 800 internal instructors participating in course development and teaching
Assessment of instructors' skills, content design and teaching performance for selecting and awarding outstanding lecturers



Online training courses

Sharing training course resources through video and system networks, and providing a full coverage of online and offline training of network courses



Education allowance for employees

Setting up Yu Cai Foundation to encourage lifelong learning and self-enhancement
The Group offered allowance to nine employees for pursuing external degree courses during the year with a total amount of over HK\$220,000



Paid examination leave

Employees are entitled to two days of paid examination leave every year, with a total of nearly 200 days approved by the Group during the year

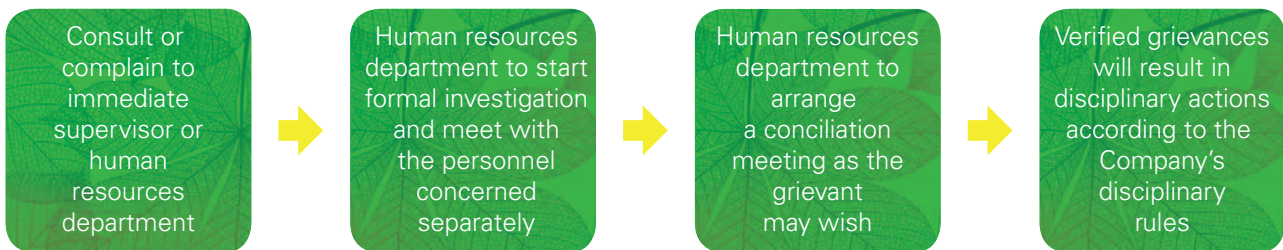
Gender Equality and Non-discrimination

Equal opportunities and non-discrimination are part of the Group's corporate culture. We appreciate the different backgrounds and professional experience of all employees and strive to establish and maintain a diversified, inclusive and non-discriminatory work environment. We implement a set of consistent selection criteria for recruitment. In our Employees' Handbook, we undertake that all employees, regardless of gender, age, nationality and race, are entitled to equal job opportunities and benefits, covering training, promotion, transfer, dismissal, layoff, employment conditions, etc.

We have formulated the Policy for Prevention of Discrimination and Harassment to provide clear and specific guidelines on prohibition of any direct or indirect discrimination and harassment concerning gender, marital status, pregnancy, disability, family status, race, etc. Employees are welcome to report any suspected cases via the grievance mechanism, so as to protect the rights and interests of each employee. In 2016, the Group received no report of discrimination case.

Grievance Mechanism

In order to ensure the continued effectiveness of the Group's employment management system, we have developed a grievance mechanism to encourage employees to voice their opinions on any employment issues. For construction site workers employed by sub-contractors, there are dedicated site officers in charge of labour relations to receive and handle grievances. During the year, the Group received no grievances in this aspect.



The Group will engage independent consultants to assist in surveys on employee satisfaction through in-depth communication with employees belong to different employee categories in various regions by meetings, panel discussions and questionnaires in the future, so as to understand their opinions and expectations on compensation and benefits, health and safety, development and training, working environment and communication channels, etc. This initiative will help the Group further improve its competitive employment management system and map out its talent development plan.

CSCI and Partners

CSCI has business presence in construction engineering, external wall works, infrastructure operation, etc. The Group is committed to pursuing high project quality, and our business associates play an important role in this process. In addition to implementing stringent internal control, the Group maintains high standards for all operational aspects and works with partners to build a sustainable supply chain.

The Group has approximately 1,800 suppliers around the world, including sub-contractors and machinery suppliers. However, as the Group's subsidiaries engage with the sub-contractors and suppliers independently, the current data system is not able to identify duplicate suppliers. In the coming year, the Group plans to further upgrade its supply chain data collection system to present the numbers of sub-contractors and suppliers in a more comprehensive and accurate manner.

Major sub-contractors and suppliers of the Group

Sub-contracting	Engineering contractors
Building materials	Suppliers of steel, concrete and related products, paint, chemicals, decorations and sanitary ware, electrical and mechanical materials and equipment, electric appliance and metal
Machinery	Suppliers of construction site equipment and machinery
Stationery supplies	Suppliers of office stationery



Project Quality Management

We believe that compliance is only the most fundamental requirement for quality management. In order to offer satisfactory products and services to customers and ensure their health and safety, the Group has quality-related plans and targets specific to procurement, construction and production. The Group formulates specific guidelines on work procedures, designates dedicated personnel to supervise the implementation thereof, and metes out reward or penalty based on performance. The Group has won an array of highly recognised awards in quality management in Hong Kong. During the reporting period, none of our projects recorded any accident or prosecution caused by quality problems in breach of law.



Materials procurement management

No warning letters from clients regarding the supply or quality of materials
99% of suppliers passed the supplier performance evaluation



Construction management: building works

The numbers of minor and general quality incidents were within limits
The initial acceptance rate of clients reached 90% — 100%
The pass rate of initial waterproof tests was 100%



We received a non-attainment report on the children's hospital project due to construction progress. The Group defined the case as a serious quality incident according to the established internal guidelines and, based on the investigation findings, implemented a construction improvement scheme
There was one project with a score below the average score rated by the Hong Kong Housing Department and an improvement scheme has been formulated



Construction management: civil works

The numbers of minor and general quality incidents were within limits
Zero case of serious quality incident
99% of sub-contractors passed the sub-contractor performance evaluation
There was no non-attainment report
The initial acceptance rate of clients reached 92% — 100 %



There were six projects with quarterly performance scores below the target and improvement schemes have been formulated



Construction management: foundation works

The numbers of minor and general quality incidents were within limits
93% of sub-contractors passed the sub-contractor performance evaluation
There was no non-attainment report
Two serious quality incidents occurred, which have been rectified by implementing construction improvement schemes based on the investigation findings
The pass rates of joint acceptance inspection, pile core acceptance inspection, mud brick pressure test and load test all reached 100%



There was one project with a piling performance score below the target and improvement schemes has been formulated



Construction management: electrical and mechanical works

The numbers of minor and general quality incidents were within limits
Zero case of serious quality incidents
100% of sub-contractors passed the sub-contractor performance evaluation
There was no non-attainment report
The initial acceptance rate of clients reached 93.9% – 100%



There was one project with a quarterly performance score below the target due to construction progress



Production management: production of prefabricated construction units

No cases of warning letters, grievance letters or delivery delay were received
Zero case of serious quality incident
Waste concrete accounted for only 0.01% of the annual total

We believe that continuous review and improvement of the quality management system can help the Group identify the risks and opportunities in different construction phases, and then formulate and implement appropriate measures to improve the Group's quality management performance. Over the past year, we focused on improving our quality management to make it more systematic and standardised.

Implementation and Certification of the Updated ISO9001:2015 Quality Management System

We place great emphasis on quality management system, not only to comply with local laws and regulations, or to meet the contractual basic requirements on project quality, but also to continuously enhance the Group's quality management performance. Our quality management system is built on the ISO9001 standards issued by the International Organization for Standardization, taking account of the Group's business scope and characteristics. Ten major branches of the Group have passed ISO9001 certifications and set clear quality targets and indicators respectively according to corporate and project requirements. The Group's quality manager is responsible for implementing the quality management system and reviewing the system on a regular basis to monitor quality performance and make recommendations for improvement.

In response to the updated ISO9001:2015 standards, the Group carried out preparatory work for certification of the new version of standards during the year, including adding risk management elements to quality management documents such as quality management manual, quality policy and standard operational procedures, as well as arranging ISO9001:2015 quality management and ISO31000 risk management training for the relevant personnel. China State Construction Engineering (Hong Kong), China Overseas Building Construction, China Construction Civil Engineering, China State Foundation Engineering, China State Mechanical & Electrical Engineering, Treasure Construction Engineering and Alchmex International Construction have taken the lead in passing ISO9001:2015 Certification.

Compilation of the Quality Control Procedures for Key Construction Procedures of Projects and other Guidelines

During the year, the Group worked with various engineering companies to compile the third edition of the Quality Control Procedures for Key Construction Procedures of Projects, adding thereto the procedures for installation of fresh water pipes in building works and installation of underground continuous walls in foundation works as well as amending the classification of electrical and mechanical works and the inspection requirements for civil works.

In addition, in order to further strengthen construction site quality management and the quality incident reporting mechanism, we revised the Work Procedures for Reporting and Following up Quality Incidents at Construction Sites to specify the reporting procedures and requirements on quality incident reporting and closing of reporting for different types of quality incidents, so as to promptly understand and handle the information on any quality incidents and develop emergency response plans.

In order to constantly improve its overall quality management performance, the Group has prepared a set of guidelines on quality management of building works according to the different natures and needs of projects, which serves as a summary of the main problems from construction process in the past and the experience of construction site personnel in tackling such problems. During the year, we formulated the Guidelines on Building Surveying and Monitoring, the Guidelines on Waterproof Quality Control of Building Works, the Guidelines on Quality Control over Installation of Fresh Water Pipes and the Guidelines on Acceptance Inspection of Privately-owned Residential Housing Projects, which were circulated to various housing construction sites.

Corporate Codes of Conduct

In pursuing business value, our employees always maintain a responsible attitude towards customers, business associates and our society. The Corporate Ethics and Disciplinary Code provides that all directors and employees must follow the principle of integrity and fairness in all kinds of business activities and ensure that all such activities are in strict compliance with relevant laws and regulations and meet the high standards of business ethics, governance and integrity.

The Group firmly believes that a market environment for fair competition will help improve overall product quality on a continuous basis. In the coming year, we plan to carry out preparatory work for developing guidelines on prevention of anti-competition practices and to arrange appropriate training for our employees.



In a free market economy, the competition among enterprises can improve economic efficiency and encourage innovation, and motivate enterprises to provide quality products at reasonable prices to meet the needs of consumers. By far, more than 120 countries have enacted pro-competition laws to prohibit acts that impede market competition. International practices show that consumers can generally benefit from the implementation of pro-competition laws.

Customer Privacy Protection

As stated in our Employee Manual, the Group is committed to ensuring that all confidential or special information provided by customers, employees and business associates remains strictly confidential. Without their authorisation, such information will not be disclosed to any third party or made available to public. Externally, we enter into confidential agreements with clients and sub-contractors to ensure that relevant requirements are strictly followed across the supply chain.

Fair Business Practices

In the principle of fairness and impartiality, the Group treats all partners equally and is committed to establishing partnerships with all partners based on mutual trust.

The Group adopts the Procedures for Materials Procurement to ensure full compliance with the relevant requirements on construction quality, safety, health and environmental protection by suppliers. The procedures contain provisions for compilation of a list of approved suppliers, procurement, sourcing, acceptance inspection, storage, maintenance, distribution, penalties imposed to underperformed suppliers and risk management over the procurement of materials conducted during the year. The specific approval processes by business nature and size of procurement are set out in the procedures.

During the reporting year, the Group invited tenders for 100% of its purchases, and all approved suppliers had equal opportunity to submit their bids.



Compilation of a list of suppliers

- Suppliers must complete a "Supplier Pre-review Form", in which the information provided by the suppliers is checked by the procurement staff.
- The departmental management is responsible for reviewing and approving applications by suppliers.
- If, in exceptional circumstances, it is necessary to engage a supplier who is not included in the list, approval must be obtained first by the general manager of the department.



Assessment of suppliers

- A comprehensive assessment of suppliers with which we have a business relationship is conducted annually in various aspects covering the timeliness of goods supply, quality, safety, environmental protection, service, compliance, business conduct and finance.
- Approved suppliers will be included in the list of provisional suppliers if they do not have business dealings for five years; if a supplier on the list does not have business dealings for more than three years, it will be removed from the list and is required to be re-evaluated before it can be included in the list again.
- If a supplier fails to meet the Group's comprehensive regulatory requirements, it will be disqualified from submitting tenders on a temporary basis; if it fails to make improvements within a short period of time, its tendering qualification may be removed from the list of approved suppliers.



Updating of the list of suppliers

- Suppliers' performance will be reviewed and the list of suppliers will be updated.
- Suppliers removed from the list cannot be engaged again, unless approved by the general manager of the materials department in exceptional circumstances.

We place great emphasis on communicating with our suppliers, with an aim to make sure that all business associates are treated fairly and rationally. The officer-in-charge of the materials department convene regular meetings with suppliers to exchange market information and discuss supply and demand conditions. For all large-scale purchases, we invite suppliers to a valuation meeting, at which site managers will explain the requirements, and suppliers will talk about products and market conditions. This ensures communication and understanding between both sides. To collect the views of our business associates more systematically, we conduct an annual satisfaction survey and performance assessment for our evaluation. At the beginning of the year, we also invited suppliers to attend interviews with the senior management of the Group to offer opinions and suggestions on future cooperation.

The Group further strengthened the internal control of the payment process in 2016, and 90% of the invoices were paid during the collection period under contracts in the year.



Annual partner satisfaction survey

The materials procurement department invited 100 major suppliers to participate in a partner satisfaction survey at the beginning of the year by means of a questionnaire survey that covered two major aspects: corporate social responsibility (including waste reduction initiatives as well as anti-corruption and self-discipline) and employees' work attitudes (including behavioural performance as well as collaboration effectiveness and results). Based on the 30 questionnaires received, the average score for the year was 74.6 points (2015: 73.86 points), and the highest satisfaction score was 85 points.



Performance assessment

According to the "Standard Work Procedures", the Group conducted an annual assessment of the work performance of suppliers with supply records over the past year. During the reporting year, the pass rate of the suppliers' performance assessment was 99%.

It is the responsibility of all employees to report any possible breach of the disciplinary code to the Group's administrative and public relations department. Any employee who violates the code will be subject to internal disciplinary action and may even be dismissed. During the year, the Group did not find any cases in breach of the disciplinary code, including misconduct related to customer information privacy, anti-competition or tender invitation.



Managing Environmental and Social Risks

Procurement Principles

- During the procurement of materials, procurement staff must take into account both the quality of goods as well as safety, health and environmental factors such as noise, energy consumption, dust, waste gas, waste materials, chemicals and so on
- When a project contract contains special requirements for safety, health and environmental protection, the procurement staff are required to explain this to the suppliers and set out the relevant special terms and conditions in the contract

Under the new regulations, the materials department conducts regular analysis and evaluation on various risks such as prices of major materials, project requirements as well as market supply and demand, and to prepare relevant reports as well as formulate follow-up and monitoring initiatives. During the reporting year, the materials department reported every two months to its officer-in-charge and the officers-in-charge of all project companies on the market conditions and movements in the prices of materials (including steel bars, H-piles, flashboards, diesel, copper and aluminium) and in currencies (including Renminbi, euro and yen); reported every quarter on the price risks associated with major project materials at the stage of tender submission and construction; and offered recommendations on future risks, including enhanced control measures and risk assessment of major suppliers.

Management of installation materials for freshwater pipes and establishment of an ISO 31000 system for risk management

The Group continued to communicate with the Housing Department on the issue of lead contamination in fresh water as a result of the suspected use of tainted material in freshwater pipes in Kai Ching Estate and Hung Hom Estate (Phase 2). It offered appropriate assistance to the affected residents, including the installation of water filters, construction of temporary water supply systems and replacement water pipes, to mitigate the impact of the incident on the residents. The Group worked in line with the arrangement of the Housing Department's Estate Office. The freshwater pipe replacement project has been carried out in phases. At present, water pipes in most of the public locations have been replaced.

Moreover, the Group is proactively cooperating with the Hong Kong Government in implementing a number of new initiatives to enhance construction works. During the year, we further improved the regulatory regime for three aspects, namely project sub-contracting, construction procedures and materials purchase, to ensure the project quality of the Group.

Establishing a risk management system	<ul style="list-style-type: none"> • We established a risk management system for freshwater pipe installation materials for all new sites of the Housing Department based on the ISO 31000 risk management profile. Moreover, we carried out the replacement of freshwater pipes particularly at the sites of Kai Ching Estate and Hung Hom Estate (Phase 2) of the Housing Department, as well as an external audit of the risk management system for the replacement of freshwater pipes and installation materials, which passed the audit
Improving the materials quality control process for sub-contractors	<ul style="list-style-type: none"> • We extended the sub-contractors' construction materials management approach to all sites and improved our control of materials at source and the efficiency of accountability
Strengthening the quality control procedures for freshwater pipe installation	<ul style="list-style-type: none"> • We reinforced the requirements for relevant inspection and procurement records in existing quality monitoring procedures for copper pipe welding materials on sites
Enhancing the professional standards of engineering staff for freshwater pipes	<ul style="list-style-type: none"> • We enhanced the qualification requirements for internal auditors and continued to provide appropriate training • We compiled a booklet on the "Guidelines for Quality Control of Freshwater Pipe Installation" for distribution to all housing sites

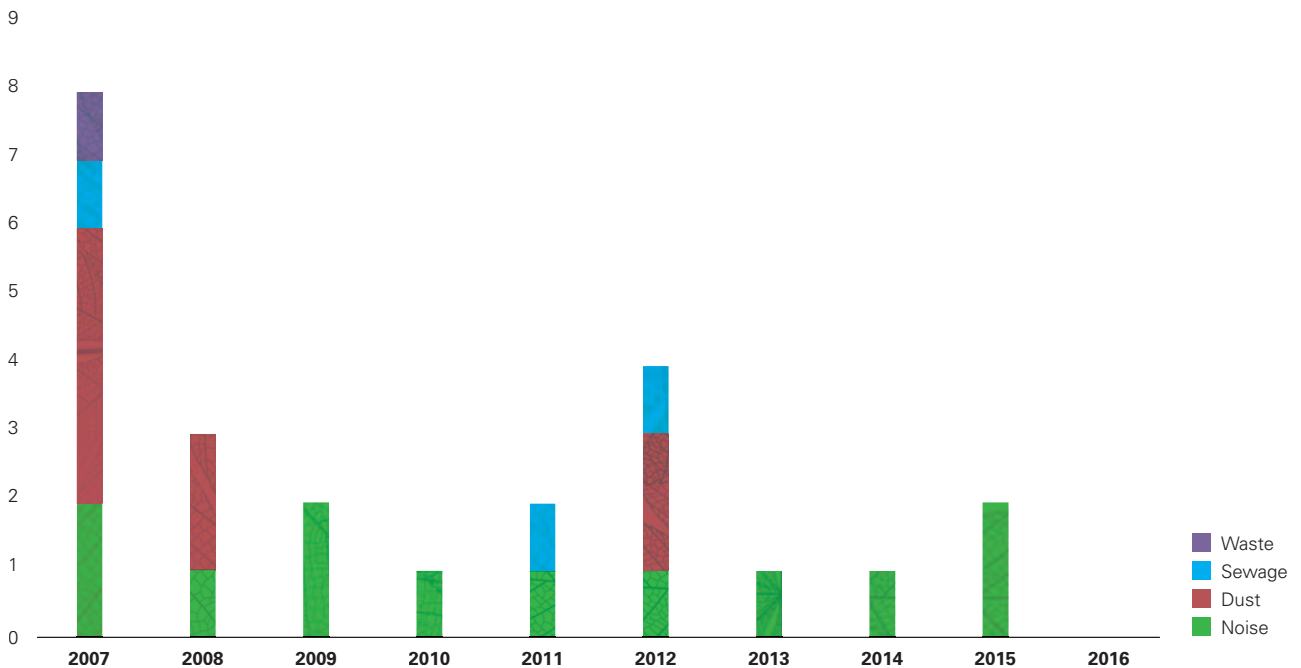
CSCI and the Environment

Every procedure in an engineering project may cause pollution and damage to the environment. The Group has formulated the Environmental Policy and the Energy Policy in an effort to build up an environmental management system and integrate it into daily operations.

Each subsidiary of the Group has a dedicated department to coordinate and implement environmental protection measures and objectives, and to address environmental issues. We carry out a series of environmental management measures at construction sites, covering engineering design, materials procurement and various construction procedures. The Group has also adopted measures concerning noise, dust, pollution discharge, waste, energy, carbon emissions and biodiversity to ensure that all business activities are strictly in compliance with local laws and regulations.

In 2016, there was no confirmed case of violation of environmental regulations within the Group.

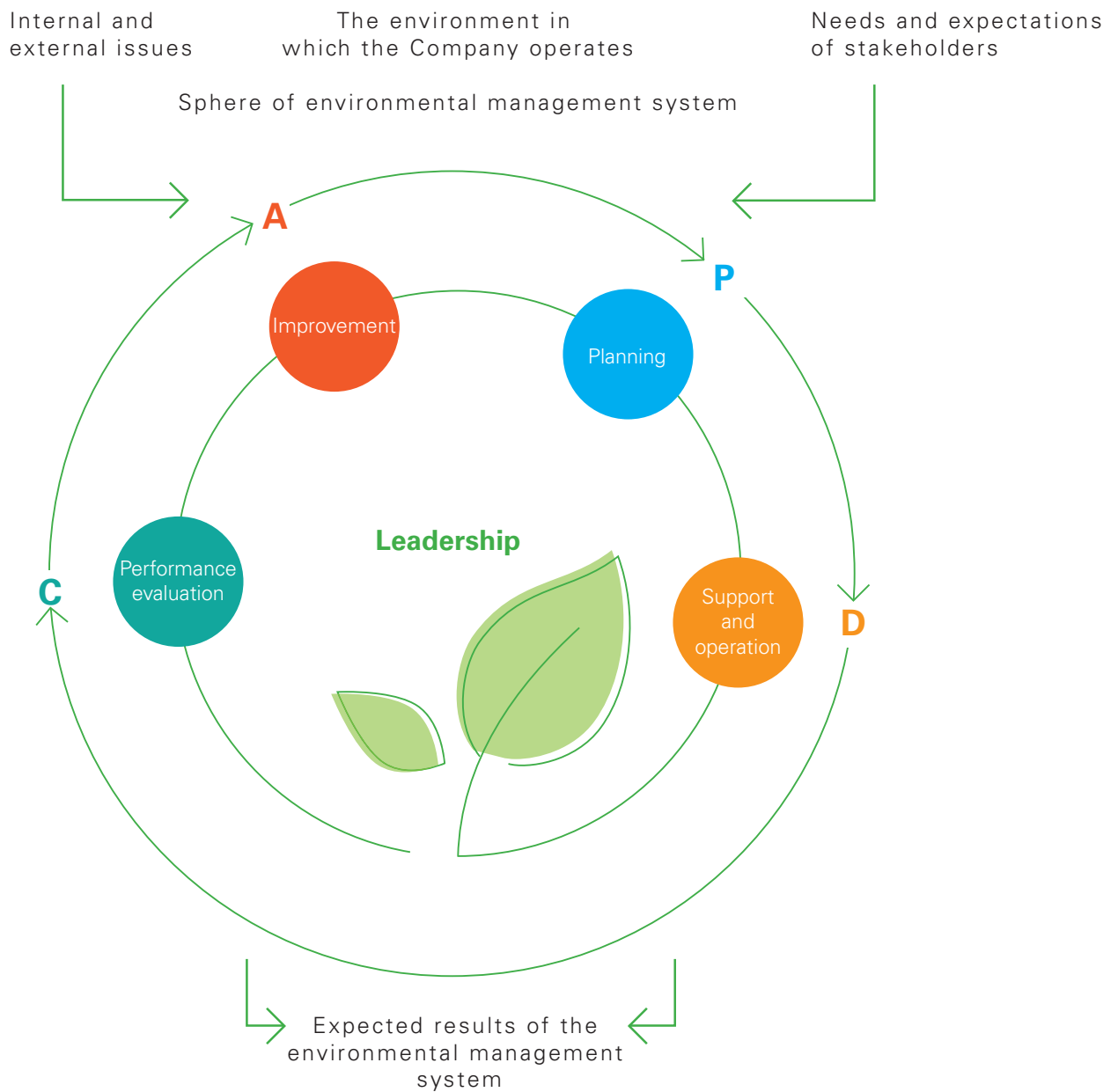
Number of confirmed cases of violation of environmental laws and regulations



Managing Environmental Impacts with an Up-to-standard System

Environmental management is a dynamic process. We strive to constantly improve the Group’s environmental management system, so as to eliminate or reduce any possible negative impacts of business operations on the environment. Our environmental management system is built on ISO14001. In order to ensure that the Group’s environmental protection work is carried out properly and effectively, we upgraded our environmental management system in Hong Kong to the latest ISO14001:2015 standards during the year to further enhance environmental management performance.

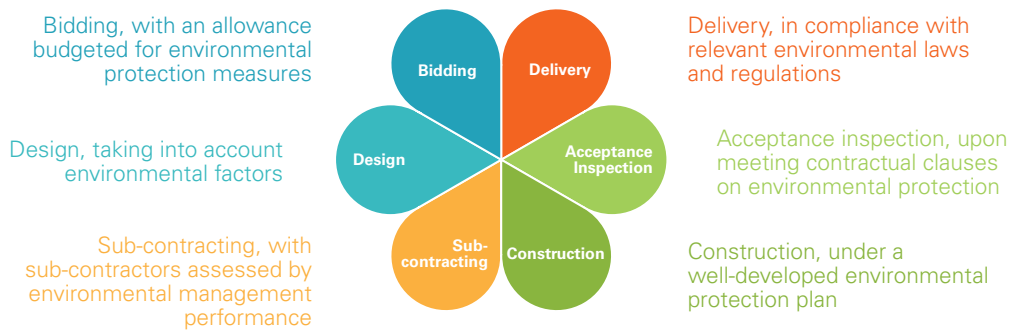
The model for establishing the environmental management system of the Company:



The environment management system of the Group’s Hong Kong business incorporates the following additional elements:



Integration of project lifecycles into the environmental management system:



Whether such management system can be effectively implemented depends on the support and collaboration of the staff. The Group arranged for a total of 47 managers from various departments and construction sites to participate in the external training on ISO14001:2015 Environmental Management System and learn about the contents of the upgraded version of the management system, so as to enable them to carry out preparatory work as early as possible, and 13 of the trainees also obtained the ISO14001 audit certificate, so that they will be qualified to serve as internal auditors of environmental management system after completing the relevant advanced training.

In addition, after completing the revision of management documents, the Group offered “Awareness Training and Internal Auditor Advanced Training on ISO14001:2015 Environmental Management System” and “Training on Implementation of and Internal Audit under ISO14001:2015 Standards” to nearly 100 construction site managers, safety and environmental officers and internal auditors, in order to make sure that all of them are well informed of the newly-introduced contents.

Key Measures for Environmental Management in 2016

<p>Guidelines</p> 	<ul style="list-style-type: none"> • Prepared the fifth edition of the Guidelines on Safety, Environmental and Security Work at Construction Sites which sets out the Group's requirements on safety, environmental protection and security management • Prepared the Environmental Management Manual, the Work Procedures for Internal Audit of Environmental Management, the Work Procedure for Environmental Management and the Energy Management Manual in accordance with ISO14001:2015, together with a series of standard work procedures to break down the environmental management tasks
<p>Communication</p> 	<ul style="list-style-type: none"> • Compiled the first issue of Quarterly Safety and Environmental Newsletter to share with construction site workers the latest information on safety and environmental management, including the quarterly priorities of safety management, experience sharing on construction site safety management, recent awards, warnings on safety and environmental management and recent notices of the safety and environmental management department
<p>Resources</p> 	<ul style="list-style-type: none"> • The Group currently has 16 employees with BEAM Pro qualifications, an increase of 5 over that of 2015 • Appointed environmental liaison and dedicated environmental officers to assist in coordinating environmental affairs at construction sites • Encouraged and helped well-performed construction sites to participate in external environmental contests
<p>Inspection</p> 	<ul style="list-style-type: none"> • Conducted weekly inspections on construction works at construction sites with high environmental management risks, covering dust control, disposal of sewage and construction waste, etc. During the year, the Group issued warning letters to two unsatisfactory construction sites and strengthened inspection on the covering of the open-box beds of dump trucks before leaving a construction site • The Group enhanced noise control measures at high-risk construction sites, including surprise inspections on holidays and at night, in an effort to identify and resolve any non-compliance as soon as possible; as at mid-August, the Group had conducted 47 such inspections on construction sites, 3 of which found non-compliances. The safety and environmental management department issued yellow-card warnings to the construction sites concerned, and strengthened inspections on such sites and helped them apply for more appropriate construction noise permits. In addition, the Group required each construction site to submit beforehand the Construction Schedule of Construction Site for Holidays/Nights for better supervision in this regard. The Group also maintained close communication with construction sites to ensure strict implementation of water pollution control measures
<p>Certification</p> 	<ul style="list-style-type: none"> • Improved the environmental management system based on the principles and requirements of ISO14001:2015
<p>Innovations</p> 	<ul style="list-style-type: none"> • Took part in international projects certified by the Building Environmental Assessment Method (BEAM) or the Leadership in Energy and Environmental Design (LEED) • Promoted the development of green buildings and employed more prefabricated units in buildings
<p>Training</p> 	<ul style="list-style-type: none"> • Hosted various environmental training courses, including "Environmental Liaison Training", "Environmental Training for New Employees" and "Training on Application for Construction Noise Permit", which recorded more than 450 participants.

Carrying Out Environmental Protection Work with Concrete Objectives

In response to environmental impacts from operations, in early 2016, we developed a number of key environmental objectives and targets and adopted a succession of environmental protection plans and measures.

Water Efficiency Management

We strive to use water efficiently in every aspect of business. As the precautionary measures taken by our construction sites involve the use of water resources, such as regular sprinkling of water on the main transport routes and thorough cleaning of all vehicles before leaving a construction site, we take water management very seriously and closely monitor water use at construction sites. We set up water recycling systems at most construction sites for sprinkling and car washing. In addition, Shenyang Huanggu Thermal Power Company Limited, a subsidiary of the Group, improved its system for using reclaimed water to enhance water efficiency in industrial production in 2016.

In addition, the Group conducted a workshop on use of environment-friendly tanks at construction sites and environmental protection regulations on water pollution, inviting experts to lecture construction site managers on how to use environment-friendly tanks and the requirements of relevant environmental regulations. The Group also held a number of training sessions on operation of environment-friendly tanks for frontline workers at construction sites in an effort to have each sewage treatment machine managed by a dedicated operator. We dispose of the garbage and construction waste generated during the construction process in strict compliance with the relevant local regulations.

There was no case of violation of the laws and regulations on disposal of sewage and waste in the past four years within the Group.

Environmental objectives	Target for 2016	Environmental performance in 2016	Target for 2017
Water saving at construction sites	General construction sites: less than HK\$62,000 per HK\$100 million turnover	96% of construction sites met the target	General construction sites: less than HK\$61,000 per HK\$100 million turnover
	Bored pile construction sites: less than HK\$680,000 per HK\$100 million turnover		Bored pile construction sites: less than HK\$660,000 per HK\$100 million turnover

Use of Building Materials

The Group pays great attention to environmental protection and is committed to reducing the consumption of natural resources. We have developed an array of measures and targets regarding building materials through the environmental management system. In 2016, except for the targets on paper consumption at construction sites and office buildings, all other targets were achieved as scheduled. We will actively improve our electronic document management system to achieve the ultimate target of paperless construction sites and offices.

Data on the Group's use of materials in 2016 are set out in the Key Performance Data herein.

Environmental objectives	Target for 2016	Environmental performance in 2016	Target for 2017
Reducing wood consumption	Less than 135 m ³ per HK\$100 million turnover	100% of construction sites met the target	Less than 133 m ³ per HK\$100 million turnover
Reducing wastage of concrete	Less than 2.0% (for general construction sites) Less than 6.0% (for bored pile construction sites)	100% of construction sites met the target	Target unchanged
Reducing wastage of reinforcing steel bars	Less than 4.5% (for housing construction sites) Less than 3.0% (for civil engineering construction sites) Less than 4.0% (for foundation construction sites)	100% of construction sites met the target	Target unchanged
Reducing paper consumption (for construction sites)	Less than 350 packs of A4 paper per HK\$100 million turnover	92% of construction sites met the target	Target unchanged
Reducing paper consumption (for office buildings)	3% reduction in total paper consumption from the annual average in 2013-2015	6 supporting departments slightly exceeded the target limit	3% reduction in total paper consumption from the annual average in 2014-2016

Energy Efficiency Management

The Group has developed its energy policy to set energy conservation as one of our fundamental policies. All employees must implement the adopted measures, including purchase of energy-efficient products and services, and assume responsibility for the Group's overall energy efficiency. By building up an energy management system, we develop and regularly review our energy objectives and targets to continuously enhance the Group's energy performance.

Almost all of the Group's energy-related environmental objectives for 2016 were achieved on schedule, except the one related to total office electricity consumption which increased slightly by 0.58% over that of the previous year. We will review the total office electricity consumption to map out appropriate energy-saving measures. Meanwhile, we set a higher electricity-saving target for construction sites for 2017, i.e. reducing the electricity expense per HK\$100 million turnover from HK\$260,000 to HK\$250,000.

For details of other energy consumption of the Group during the year, please refer to the Key Performance Data herein.

Environmental objectives	Target for 2016	Environmental performance in 2016	Target for 2017
Electricity saving at construction sites	Less than HK\$260,000 per HK\$100 million turnover	100% of construction sites met the target	Less than HK\$250,000 per HK\$100 million turnover
	Cut annual electricity consumption per m ² by 2.0%	Target met, with 2.1% reduction	Target unchanged
	Only use T5 or LED lights at new construction site offices	100% of new construction site offices met the target	Target unchanged
Overall electricity saving at offices	Cut total electricity consumption by 1.0%	Electricity consumption increased by 0.58% over that of the previous year	Target unchanged
Constantly improving energy performance indicators for construction	Improve the energy performance indicators for construction by 2.0%	Overall decline of 2.1%	Target unchanged

Greenhouse Gas Emissions

Greenhouse gas emissions are closely related to climate change and global warming. As such, companies around the world are doing their parts to develop their own carbon reduction measures and targets. During the year, the Group incorporated emissions of other indirect greenhouse gases (Scope 3) in Hong Kong into carbon evaluation, and provided stakeholders with more comprehensive carbon footprint data by region and business nature. Meanwhile, we plan to conduct a comprehensive review of the existing greenhouse gas data collection mechanism in the coming year, so as to pave the way for building up annual benchmark data and developing long-term carbon reduction targets.

Greenhouse gas (GHG) emissions in 2016 by region (t CO₂-e)

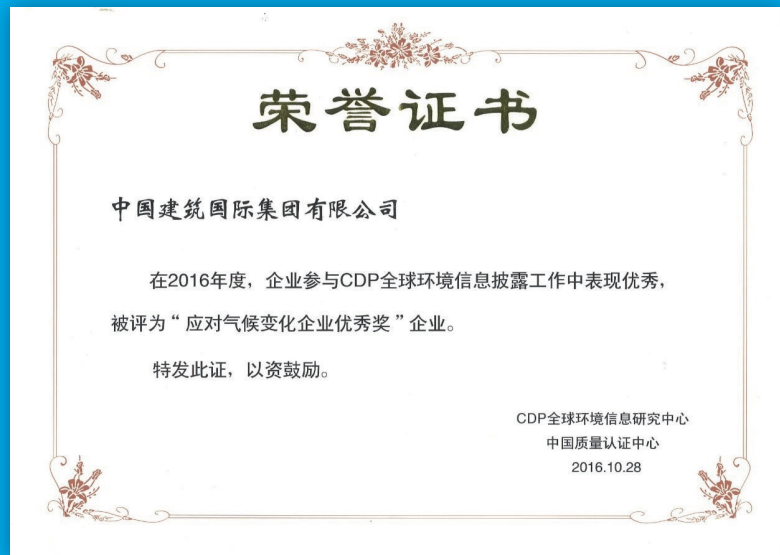
	Mainland China	Hong Kong	Macau	Overseas	Total GHG emissions by scope
Direct GHG emissions (Scope 1)	1,747,374	100,076	742	929	1,849,121
Indirect GHG emissions from energy consumption (Scope 2)	53,210	13,643	11,075	553	78,481
Other indirect GHG emissions (Scope 3)	N/A	3,836	N/A	N/A	3,836
Total GHG emissions by region	1,800,584	117,555	11,817	1,482	1,931,438

GHG emissions in 2016 by business nature (t CO₂-e)

	Construction business	Huanggu Thermal Power	Total GHG emissions by scope
Direct GHG emissions (Scope 1)	115,332	1,733,789	1,849,121
Indirect GHG emissions from energy consumption (Scope 2)	58,896	19,585	78,481
Other indirect GHG emissions (Scope 3)	3,836	N/A	3,836
Total GHG emissions by business nature	178,064	1,753,374	1,931,438

Innovative Thinking to Promote Green Building

We believe that disclosure of environmental performance data can facilitate an enterprise to plan for and implement risk management over carbon emissions and climate change. The Group has been participating in the Carbon Disclosure Project (CDP) since 2014 by filling out questionnaires to conduct annual self-review and assessment, and was granted the "Excellence in Responding to Climate Change Enterprise Award" in 2016 as a recognition of our excellent performance in global environmental information disclosure.



In November 2016, the Paris Agreement came into force, with an aim to have the global economy no longer dependent on fossil fuels in the second half of the 21st century, to hold the increase in the global average temperature within 2°C compared to pre-industrial levels and to seek to further contain such temperature increase within 1.5°C.

Innovative Thinking to Promote Green Building

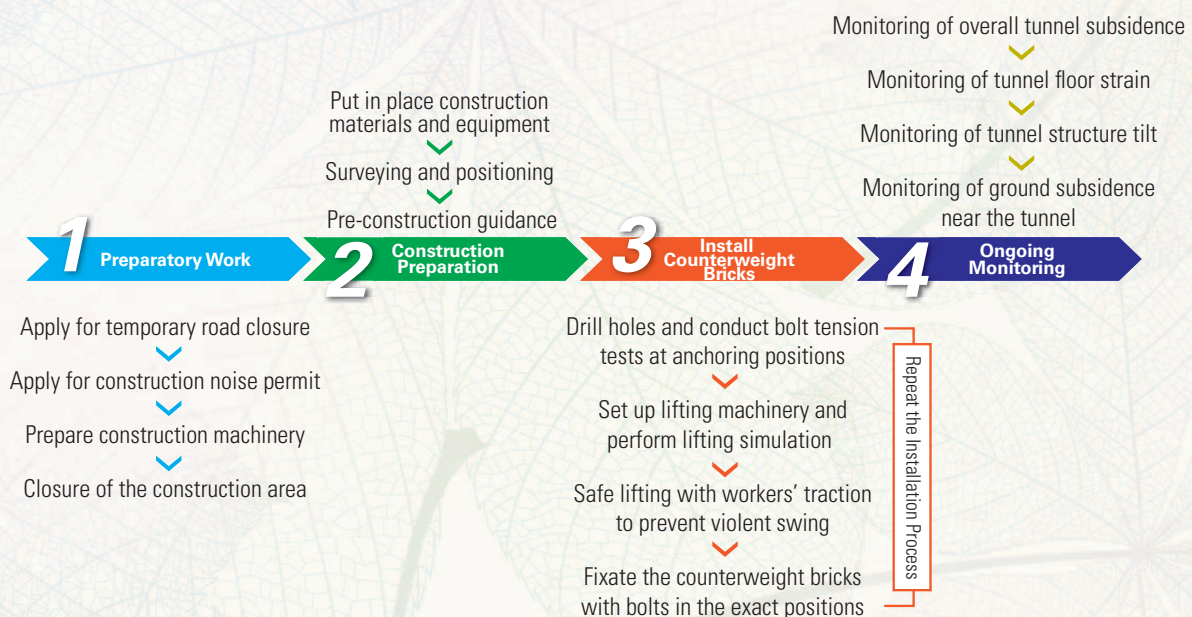
For quality management, we aim to encourage and pursue technological innovation which is also the focus of delivering on our environmental commitment. We incorporate innovative thinking into the Group's development strategy to promote a culture of innovation across the Group, and strengthen the competitiveness of the Group when confronted with opportunities and challenges in sustainable development.

Causeway Bay Typhoon Shelter Section of the Central-Wan Chai Bypass Project

China State Construction Engineering (Hong Kong) Limited ("China State Construction Engineering (Hong Kong)") undertook the tunnel works of the Causeway Bay Typhoon Shelter Section of the Central-Wan Chai Bypass Project, including a section of about 200 m in the ex-Wan Chai Public Cargo Working Area, a tunnel of about 400 m at the Causeway Bay Typhoon Shelter section, a 150-m mined tunnel beneath the Cross-Harbour Tunnel and other related ancillary works. Due to the unique design of the bottom of the Cross-Harbour Tunnel, the excavation methods and construction procedures for the new tunnel involve fairly high technical risks as they may result in severe subsidence or floating of the existing Cross-Harbour Tunnel. After repeated consultations on the technological solutions for construction of the project with academicians, experts and scholars at home and abroad, we made multiple internationally advanced technological innovations in anti-floating design and construction of the tunnel structure beneath the Cross-Harbour Tunnel, large-diameter pipe roof support, super-large cross-section tunnel excavation, and real-time monitoring of tunnel subsidence, etc.



Key tasks



Large-scale deep excavation or construction of an underpass tunnel in the vicinity of an existing tunnel crossing a river or the sea has a great risk of floating the existing tunnel, especially the sections leading to the surface. Therefore, we have to consolidate the existing tunnel and take precautions to prevent its floating, so as to ensure that the new construction works will not affect the normal operation of the existing tunnel.

The traditional anti-floating anchor reinforcement, which involves complex construction methods and myriad equipment, can affect tunnel traffic for a long time and even cause damage to the natural environment. We overcame the shortcomings of the traditional construction methods and installed counterweight bricks as additions on the walls near the exits of the existing tunnel to increase the anti-floating stability of the tunnel structure.

We were also granted short-term patent certificates by the State Intellectual Property Office and the Patents Registry of the Intellectual Property Department (Hong Kong) for such temporary reinforcement method for preventing the floating of the existing subsea tunnel.

HUO Yi,

Senior Construction Site Manager



In addition, since the mined tunnel construction proceeded in a confined space, there emerged environmental concerns during construction, such as loud construction noise, lots of dust and lower air quality. To address the construction noise, we employed hydraulic cleaving machines for rock splitting. This method can greatly reduce the noise caused by construction as compared with that of the traditional drilling method. For the dust and air quality problems, we used drilling machines to perform wet drilling, i.e., to wash dust away from rock crevices with high pressure water in the drilling process, and put in place automatic spray heads to reduce dust flying by sprinkling water. In addition, we employed high-power shaft fans to enhance tunnel ventilation, and used air quality testing machines for real-time monitoring of air quality inside the tunnel.

Due to the high technical difficulties and effective project management of the project, we won the 2016 NCE Tunnelling Award for projects worth US\$500 million or above out of the over 40 competing tunnel projects around the world at the New Civil Engineer (NCE) Tunnelling Competition held by the Institution of Civil Engineers ("ICE"). This is the first major award received from ICE in similar competitions by China State Construction Engineering (Hong Kong) since its inception, which boosted the Group's international visibility and reputation.



Prefabricated Construction to Mitigate the Impacts of Construction on the Environment and Society

The adoption of prefabricated construction in the construction process can not only improve construction quality but also streamline work procedures. Compared with traditional construction methods, prefabricated construction can better cater to the real construction needs and improve work efficiency in a limited construction environment. The finished construction units can be delivered to construction sites for quick installation, which not only alleviates the impacts on the surrounding communities by reducing the noise and dust caused by construction, but also makes the construction sites safer and benefits the environment and society.

Shenzhen Hailong Construction Products Company Limited ("Hailong Company"), a subsidiary of the Group, is engaged in the production of prefabricated construction units, including internal and external wall panels, floor panels, staircases, balconies, kitchens and bathrooms, all kinds of roofing beams, crane beams, connecting beams, bridge box beams, bridge girders, road and bridge parapets, and a wide range of tunnel and subway tube sheets, fences and other related products. Hailong Company implements a set of strict monitoring procedures throughout the production and quality inspection processes of prefabricated construction.

In the course of project design, we proactively employ more fabricated construction units in infrastructure and affordable housing projects to reduce material wastage through quality and cost control.



CSCI and the Community

CSCI is well aware that a sustainable corporation is accountable not only to its shareholders but also to all its stakeholders, so as to raise the quality of life in the community where it has a presence and across the whole society. We have done our best to serve the community and respond to the current needs of our society. Our current community programme focuses on three areas that cover building infrastructure and affordable housing projects, maintaining a good relationship with our neighbours and participating in charity events. Looking to the future, we will continue to strengthen our relationship with the community and better understand the needs of residents, and plan to carry out work for formulating relevant policies in the coming year to make sure that we will take social benefits into account for all our business activities at different stages.

Building infrastructure and affordable housing projects 	Maintaining a good relationship with our neighbours 	Participating in charity events 
to respond to the needs of people's livelihood by helping needy community residents to live and work in peace and contentment	to reduce the impact of our operations on the surrounding environment and to enhance neighbourhood	by encouraging employees to join community charity events as contribution to society

Building Infrastructure and Affordable Housing Projects

The Group has been proactively participating in public infrastructure and affordable housing construction over the years, making good use of its own business advantages to help solve the livelihood needs of the community.

Supporting the housing policies of the Hong Kong Government over the past 35 years, the Group has built more than 120,000 public housing units up to now. Since 2010, the Group has also invested in quality affordable housing projects in different regions of China under the "build-transfer" mode. Following the securing of the first PPP project in China last year, the Group successfully secured a number of major PPP projects for different types of business during the year, including highways, municipal roads, bridges and tunnels, underground utility tunnels, affordable housing, hospitals, schools and factories. These projects are of great significance to promoting local economic development and improving the quality of life of the residents. The Group's planned projects in public housing and affordable housing still under construction or already completed in Mainland China, Hong Kong and Macau in 2016 are set out in the key performance tables of this report.



The Group has an active involvement in community building to shape a liveable community for residents. During the reporting period, we undertook Hiram's Highway Improvement Stage 2 in Hong Kong to help relieve traffic congestion in the Sai Kung District. Hiram's Highway is the only principal road linking Sai Kung to Kowloon East and Tseung Kwan O. Due to the narrow carriageway, in the event of traffic accident or other maintenance works, full closure of carriageway may be required, which will seriously affect the daily life of the local residents. Moreover, the existing Hiram's Highway was designed based on old design standards. The lack of ancillary facilities also results in inconvenience to road users. The project contract commenced in early 2016, with an aim to mitigate traffic congestion and improve road design. The project is expected to be completed by the end of 2020.

Under the project, we have to demolish a vehicle bridge with a pedestrian walkway across Ho Chung River and to rebuild a new bridge and relocate the village office, public toilet and refuse collection points affected by the widening works. To this end, we built temporary roads, erected temporary noise barriers, planted temporary trees, regularly cleaned the streets, etc., to mitigate the impact of the project on the residents at Marina Cove, Ho Chung Village and Luk Mei Tsuen and on the passers-by travelling to and from there.

Project Name:	Hiram's Highway Improvement
Location:	Two sections of Hiram's Highway between Clear Water Bay Road and Marina Cove as well as a local access road to Ho Chung and Luk Mei Tsuen
Total contract amount:	HK\$1.26 billion



Maintaining a Good Relationship with Our Neighbours

We understand that any construction project will have an impact on the surrounding environment and the lives of nearby communities. We care about the communities adjacent to our projects. We aim to reduce the impact of the construction process on the surrounding communities by carrying out environmental management on our sites. We also carry out public relations management on our sites by communicating with the residents, businesses and passers-by near our projects so as to maintain a harmonious relationship with our neighbours. We post a list of the main staff and their contact details on the hoarding panels of our sites to facilitate stakeholders' direct contact with the site staff in handling inquiries and complaints in a timely manner.

Participating in Charity Events

To reflect our commitment to the vision of "Building an Evergreen Business" and the philosophy of "Exercising caution in detail and implementation; Building a strong foundation to seek greater success" of COHL, our parent company, we have established three key development areas of our social responsibility task, which are education development, environmental protection as well as poverty and disaster relief. We marshal and encourage more employees to participate in charity events related to these areas as contributions to our society in accordance with the execution standards and guidelines for regular charity projects and in line with our business features.

Environmental Protection



CSCI Environmental Protection Day

To actively respond to the “World Environment Day” and enhance the environmental awareness of its employees, the Group has hosted the “CSCI Environmental Protection Day” event for ten consecutive years. Led by the docent of WWF Hong Kong, 30 employees visited the Mai Po Inner Deep Bay Ramsar Site to gain an experience of wetland conservation in Hong Kong and to learn about the importance of protecting the precious resources of nature.

Moreover, the Group hosted a half-day guided eco-tour at Yim Tin Tsai, Sai Kung for the employees of CSCEHK and Far East Global and their families to learn about the production process of sea salt. A total of 40 people participated in the event.



Poverty Alleviation and Disaster Relief



“Hong Kong and Kowloon Walk for Millions” by The Community Chest of Hong Kong

The Group promotes the spirit of being a generous contributor to charity, with an aim to raise money for local social welfare institutions. “Walk for Millions” is one of the largest and oldest charitable fundraising events in Hong Kong. In 2016, more than 100 employees of the Group and their families participated in this event, raising a total of HK\$50,000, the proceeds of which were all donated to the “Family and Child Welfare Services” to help those families in need.



Caring about the elderly through the “March 8 Visit”

On the Women’s Day in 2016, 10 female employees visited the homes of the elderly living in Yung Shing Court, Fanling, based on the spirit of “honouring old people as we do for our own aged parents”, to care about and offer assistance to more than 50 elderly people. The event comprised a fascinating and interactive magic show, small games and a sharing session. Lastly, the volunteers delivered a lucky bag packed with food and daily necessities to each of the “old pals”. They spent a pleasant afternoon with the elderly.



Education Development



Workshop on art creation exchange programme

The "Art for ALL" Integration Programme co-organised by Far East Global of the Group and TREATS aims to provide people having different abilities and backgrounds with an opportunity for equal and free expression of ideas and feelings so as to eradicate prejudice and discrimination and to establish an inclusive society. On the day of the event, 18 employees and their families and more than 30 students from mainstream and special schools broke the communication barrier together through art creation.



Donations for building Hope Schools

As a commitment to its corporate charitable spirit "The Sea has no Limit, and Love has no Boundary", the Group has been participating in COHL's community education projects in the Mainland since 2005. As at 2016, 11 Hope Schools were built in Shaanxi, Sichuan, Chongqing, Jilin, Liaoning and other places with the support of the Group, providing a good learning environment for more than 6,800 students from poverty-stricken areas.

The Group's employees were also personally involved in the selection of sites and construction work for these schools. They promoted the public service spirit by sharing their professional knowledge. They worked as volunteers in their spare time to support education initiatives at Hope Schools.



Key Performance Indicators

Environmental Performance

Major materials used (non-renewable raw materials)

Materials	Unit	Total	Hong Kong	Macau	Mainland China	Overseas
Office paper	t	327	260	42	25	N/A
Concrete	m ³	4,896,197	792,336	249,971	3,853,890	N/A
Cement mortar	m ³	298,840	25,386	4,593	268,861	N/A
Reinforced steel bar	t	848,441	164,368	83,939	600,134	N/A
Steel beams	t	22,643	11,289	2,753	8,601	N/A
Sheet pile	t	7,340	2,304	1,916	3,120	N/A
Cement	t	547,261	121,936	217	425,108	N/A
River sand	t	598,036	280,603	1,346	316,087	N/A
Stones	t	3,309,134	156,777	21	3,152,336	N/A
Bricks	t	1,072,424	342,023	586,716	143,685	N/A
Concrete floor materials	t	569	569	N/A	N/A	N/A
Aluminium products	t	2,261	N/A	N/A	1,190	1,071
Steel products	t	10,047	N/A	541	8,678	828
Silica gel	t	41,051	N/A	N/A	40,947	104
Glass	t	57,527	N/A	14,911	42,404	212
Timber for packaging	t	930	N/A	100	830	N/A

Energy consumption and greenhouse gas emissions

Type of energy	Unit	Total
Direct energy consumption		
Diesel	L	44,176,170
Biodiesel	L	400
Petrol	L	12,275,229
Liquefied petroleum gas (LPG)	kg	20,125
Natural gas	m ³	835,741
Coal ¹	t	732,131
Indirect energy consumption		
Electricity	kWh	106,347,267
Heat	GJ	4,800

¹ Fuel used for power generation at Huanggu Thermal Power Plant

GHG emissions by region (t CO₂-e)

	Mainland China	Hong Kong	Macau	Overseas	Total GHG emissions by scope
Direct GHG emissions (Scope 1)	1,747,374	100,076	742	929	1,849,121
Indirect GHG emissions from energy consumption (Scope 2)	53,210	13,643	11,075	553	78,481
Other indirect GHG emissions (Scope 3)	N/A	3,836	N/A	N/A	3,836
Total GHG emissions by region	1,800,584	117,555	11,817	1,482	1,931,438

GHG emissions by business nature (t CO₂-e)

	Construction business	Huanggu Thermal Power	Total GHG emissions by scope
Direct GHG emissions (Scope 1)	115,332	1,733,789	1,849,121
Indirect GHG emissions from energy consumption (Scope 2)	58,896	19,585	78,481
Other indirect GHG emissions (Scope 3)	3,836	N/A	3,836
Total GHG emissions by business nature	178,064	1,753,374	1,931,438

Water consumption, sewage and waste

Municipal water consumption	m³
Water consumption	10,862,019
Sewage discharge through rain water pipes	582,213
Sewage discharge through sewer pipes	172,788
Sewage discharge through other channels	25,500

Building waste treatment	t
Total amount of recycled/renew waste at work sites	475,713
Total amount of work site waste sent to landfill	64,717
Total amount of work site waste sent to fill bank for reuse in reclamation and site formation	11,017,819
There were no serious leaks during the reporting period.	

Environmental protection investment and expenditures

	HK\$'0,000
Waste disposal	8,586
Sewage treatment	577
Emissions treatment	377
Investment in environmental protection hardware	577
Expenditure on prevention of climate change risks	142
Expenditure on employment of environmental officer	1,153
Others	110
Total	11,522

Human Resources Data

Number of employees by region, employee category, age and gender

Region	Employee category	30 or below	31-40	41-50	51 or above	Male	Female	Total number of employees by region
Hong Kong	Senior	0	4	19	17	40	0	4,573
	Middle	1	14	22	22	48	11	
	Executive	57	64	87	72	265	15	
	General	1,119	946	997	1,132	3,184	1,010	
Total number of employees in Hong Kong by age or gender		1,028	1,125	1,243	3,537	1,036	1,036	
Macau	Senior	0	1	0	0	1	0	653
	Middle	0	1	3	6	9	1	
	Executive	22	16	31	26	93	2	
	General	205	141	95	106	447	100	
Mainland China	Senior	0	14	12	9	36	0	5,351
	Middle	1	43	44	15	96	7	
	Executive	96	215	138	47	438	58	
	General	2,261	1,178	981	297	3,871	845	
Total number of employees in Mainland China by age or gender		2,358	1,450	1,175	368	4,441	910	
Total number of employees in Macau by age or gender		159	129	138	550	103	103	
Overseas	Senior	0	0	1	1	2	0	507
	Middle	0	2	2	1	5	0	
	Executive	3	3	2	3	9	2	
	General	129	197	129	34	419	70	
Total number of employees in overseas by age or gender		202	134	39	435	72	72	
Total number of employees by age or gender			2,839	2,563	1,788	8,963	2,121	11,084

Number of new employees by region, age and gender

	Number of new employees	Percentage of that type of employees
By region		
Hong Kong	2,246	49%
Macau	191	29%
Mainland China	1,292	24%
Overseas	43	8%
By age		
30 or below	1,620	42%
31–40	804	28%
41–50	752	29%
51 or above	596	33%
By gender		
Male	3,019	34%
Female	753	36%
Total number of new employees and ratio	3,772	34%

Number of employee turnovers by region, age and gender

	Number of employee turnovers	Percentage of that type of employees
By region		
Hong Kong	1,480	32%
Macau	101	15%
Mainland China	1,007	19%
Overseas	48	9%
By age		
30 or below	1,061	27%
31–40	612	22%
41–50	574	22%
51 or above	389	22%
By gender		
Male	2,202	25%
Female	434	20%
Total number of employee turnovers and ratio	2,636	24%

Work-related injury rate per 1,000 persons by region and gender

Region	Gender	Number of work-related injuries	Number of fatalities	Work-related injury rate per 1,000 persons
Hong Kong	Male	8	0	2.26
	Female	1	0	0.97
Macau	Male	4	0	7.27
	Female	0	0	0
Mainland China	Male	9	0	2.03
	Female	0	0	0
Overseas	Male	0	0	0
	Female	0	0	0
Total number of work-related injuries		22	0	1.98

Ratio of salary of male and female employees by employee category

Region	Employee category	Ratio of basic wage of male and female employees	Ratio of remuneration of male and female employees
Hong Kong	Senior	N/A	N/A
	Middle	1.21: 1	1:28: 1
	Executive	1.45: 1	1:5: 1
	General	1.60: 1	1:71: 1
Macau	Senior	N/A	N/A
	Middle	1.03: 1	1:41: 1
	Executive	1.03: 1	1:22: 1
	General	1.42: 1	1:5: 1
Mainland China	Senior	N/A	N/A
	Middle	1.14: 1	1:22: 1
	Executive	1.04: 1	1:01: 1
	General	1: 1.24	1: 1.04
Overseas	Senior	N/A	N/A
	Middle	N/A	N/A
	Executive	1: 1	1: 1
	General	1.14: 1	1:14: 1

Average number of training hours of employees by employee category and gender

Region	Employee category	Average number of training hours of male employees	Percentage of male employees trained	Average number of training hours of female employees	Percentage of female employees trained
Hong Kong	Senior	13.7	100%	N/A	N/A
	Middle	13.1	98%	3.6	82%
	Executive	21.2	90%	16.1	100%
	General	4.7	52%	1.9	26%
Macau	Senior	32	100%	N/A	N/A
	Middle	10.3	100%	19	100%
	Executive	5.1	95%	6.5	100%
	General	4.4	96%	4.5	98%
Mainland China	Senior	5.9	94%	N/A	N/A
	Middle	15.2	89%	38	86%
	Executive	22.3	95%	31.3	79%
	General	16.3	77%	11.9	81%
Overseas	Senior	0	0%	N/A	N/A
	Middle	0	0%	N/A	N/A
	Executive	3.1	0%	0	0%
	General	0.5	0%	0	0%

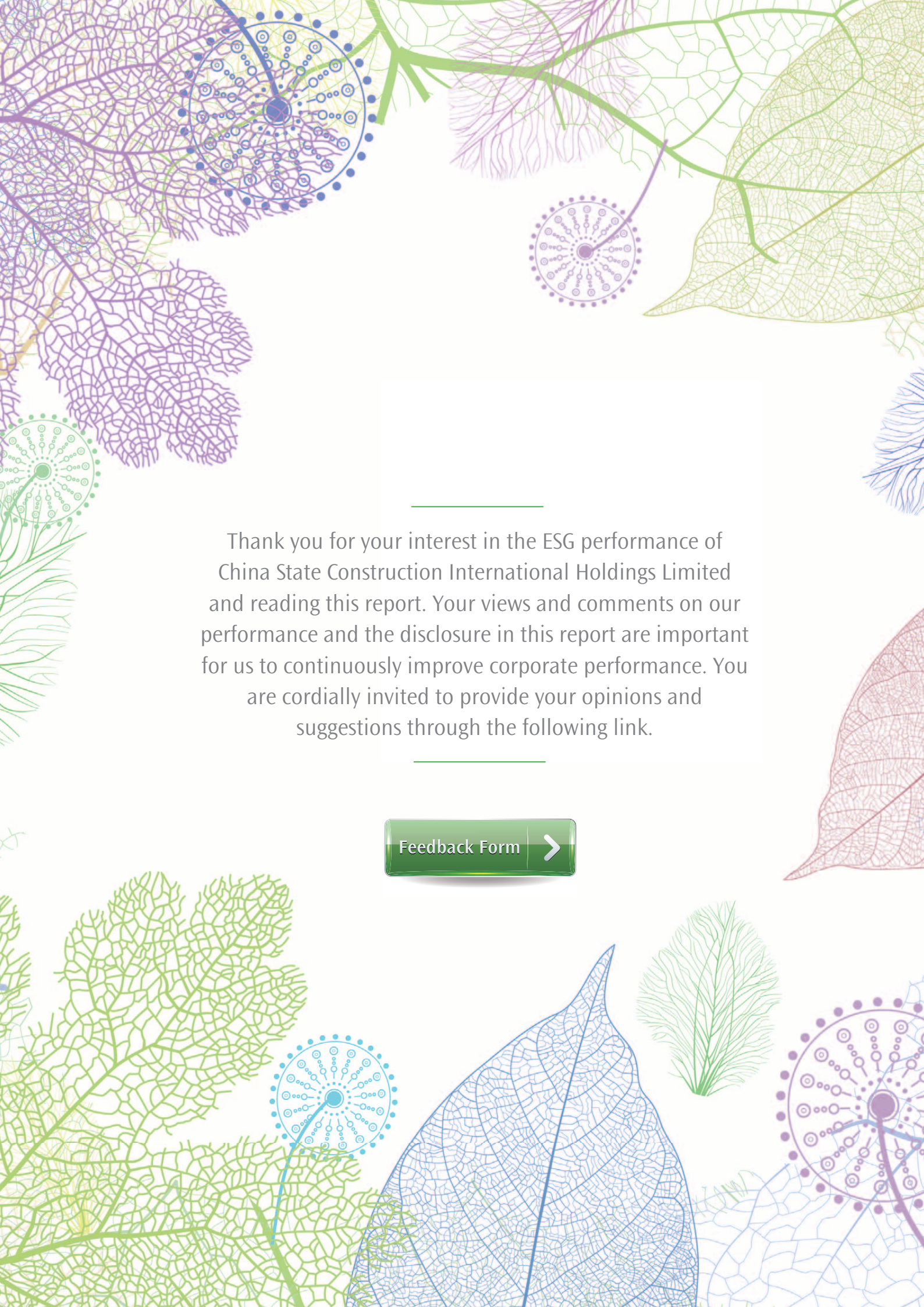
Content Index

HKEx Environmental, Social and Governance Reporting Guide			
Reporting Guide	Content	GRI	Related chapters/Notes
A1 Emissions			
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, generation of hazardous and non-hazardous waste	G4-DMA G4-EN29	CSCI and the Environment; no fines arising from violation of environmental laws and regulations were imposed
A1.1	The types of emissions and respective emissions data	G4-EN15	Greenhouse Gas Emissions; Key Performance Indicators
A1.2	Greenhouse gas emissions in total and, where appropriate, intensity	G4-EN16 G4-EN17 G4-EN18	
A1.3	Total hazardous waste produced and, where appropriate, intensity	G4-EN23	Key Performance Indicators
A1.4	Total non-hazardous waste produced and, where appropriate, intensity		
A1.5	Description of measures to mitigate emissions and results achieved	G4-EN19	Greenhouse Gas Emissions
A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved	G4-EN23	CSCI and the Environment
A2 Use of Resources			
General disclosure	Policies on efficient use of resources, including energy, water and other raw materials	G4-DMA	CSCI and the Environment
A2.1	Direct and/or indirect energy consumption by type in total and intensity	G4-EN3 G4-EN5	Key Performance Indicators
A2.2	Water consumption in total and intensity	Outside the scope of Guidelines	
A2.3	Description of energy use efficiency initiatives and results achieved	G4-EN6	Energy Efficiency Management
A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved	G4-EN10	Water Efficiency Management
A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced	G4-EN1	The products of our business operations did not use any significant amount of packaging material

HKEx Environmental, Social and Governance Reporting Guide			
Reporting Guide	Content	GRI	Related chapters/Notes
A3 The Environment and Natural Resources			
General disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources	G4-DMA	CSCI and the Environment
A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them		
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	G4-DMA G4-SO8	CSCI and Talents; no fines or other sanctions arising from violation of laws and regulations were imposed
B1.1	Total workforce by gender, employment type, age group and geographical region	G4-10 G4-LA12	Recruiting and Retaining Talents;
B1.2	Employee turnover rate by gender, age group and geographical region	G4-LA1	Outstanding Talents;
Outside the scope of G4 Guidelines	Ratio of new employees by gender, age and region		Key Performance Indicators
	Total number of discrimination cases and improvement measures taken	G4-HR3	CSCI and Talents; no reporting of discrimination cases
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	G4-DMA	Protection of Employees' Health and Safety; Key Performance Indicators
B2.1	Number and rate of work-related fatalities	G4-LA6	
B2.2	Lost days due to work injury		
B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	G4-DMA	

HKEx Environmental, Social and Governance Reporting Guide			
Content	GRI	Related chapters/Notes	
B3 Development and Training			
General disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities	G4-DMA G4-LA10	Expanding Employees' Latitude for Development;
B3.1	The percentage of employees trained by gender and employee category	Outside the scope of Guidelines	Key Performance Indicators
B3.2	The average training hours completed per employee by gender and employee category	G4-LA9	
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	G4-DMA	Prevention of Child Labour and Forced Labour;
B4.1	Description of measures to review employment practices to avoid child and forced labour	G4-HR5 G4-HR6	there were no cases of irregularity regarding child labour or forced labour
B4.2	Description of steps taken to eliminate such practices when discovered		
B5 Supply Chain Management			
General disclosure	Policies on managing environmental and social risks of the supply chain	G4-DMA	CSCI and Partners;
B5.1	Number of suppliers by geographical region	G4-12	the current data system is not able to identify duplicate suppliers. In the coming year, the Group plans to upgrade the system to present the number of suppliers accurately.
B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	G4-DMA G4-EN32 G4-LA14	

HKEx Environmental, Social and Governance Reporting Guide			
Reporting Guide	Content	GRI	Related chapters/Notes
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	G4-DMA G4-PR2 G4-PR4 G4-PR7 G4-PR8 G4-PR9	Project Quality Management; there were no cases of violation of health and safety laws and regulations as well as voluntary standards relating to products and services
B6.1	Percentage of total products sold or shipped subject to recall for safety and health reasons	Outside the scope of Guidelines	
B6.2	Number of products and service related complaints received and how they are dealt with	G4-PR8	
B6.3	Description of practices relating to observing and protecting intellectual property rights	Outside the scope of Guidelines	
B6.4	Description of quality assurance process and recall procedures		
B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored	G4-DMA	
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	G4-DMA G4-SO5	Corporate Governance System
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		
B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored	G4-58	
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	G4-DMA	CSCI and the Community
B8.1	Focus areas of contribution	G4-EC7	
B8.2	Resources contributed to the focus area	G4-EC1	



Thank you for your interest in the ESG performance of China State Construction International Holdings Limited and reading this report. Your views and comments on our performance and the disclosure in this report are important for us to continuously improve corporate performance. You are cordially invited to provide your opinions and suggestions through the following link.

Feedback Form

