



丽珠医药
LIVZON

麗珠醫藥集團股份有限公司
Livzon Pharmaceutical Group Inc.*

(a joint stock company incorporated in the People's Republic of China with limited liability)

(Stock code: 1513)



ENVIRONMENTAL, SOCIAL
and GOVERNANCE REPORT
2017

* For identification purpose only

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1 ABOUT THIS REPORT

OVERVIEW

This report is the second Environmental, Social and Governance (“ESG”) Report (the “Report”) issued by the Company, which covers the period from 1 January 2017 to 31 December 2017. This Report is prepared on an annual basis.

BASIS OF PREPARATION

This Report is prepared based on the “Environmental, Social and Governance Reporting Guide” set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited issued by The Stock Exchange of Hong Kong Limited (the “Hong Kong Stock Exchange”).

The content of this Report is defined through a systematic process, including identifying and prioritizing important stakeholders, identifying and prioritizing significant ESG issues, determining the scope of the Report, collecting the relevant materials and receipts, complying data based on such information and reviewing the data herein.

SCOPE AND BOUNDARY OF THE REPORT

The Report discloses the ESG risks and performance of the Company in accordance with the “materiality” referred to in the Environmental, Social and Governance Reporting Guide. The Report covers the Company and its wholly-owned subsidiaries and controlling subsidiaries. The scope of the Report is in line with the scope of consolidated financial statements set out in the 2017 Annual Report of the Company and shall be read in conjunction with the 2017 Annual Report of the Company.

EXPLANATION FOR ABBREVIATIONS

In order to facilitate the presentation and reading, for the purpose of this Report, “the Company” refers to 麗珠醫藥集團股份有限公司 Livzon Pharmaceutical Group Inc.* and each of “the Group”, “we” and “Livzon” refers to the Company and its subsidiaries.

DATA SOURCE AND RELIABILITY STATEMENT

The data and case study in this Report are mainly from the statistic report and relevant documents of the Company. The Company undertakes that this Report contains no false statements or misleading statements and is responsible for the truthfulness, accuracy and completeness of its contents.

CONFIRMATION AND APPROVAL

The board of directors (the “Board”) and the senior management team of the Company have reviewed this Report and guarantee that there are no false representations, misleading statements or material omissions in this Report.

AVAILABILITY OF AND RESPONSE TO THIS REPORT

This Report is available and can be downloaded from the website of the Hong Kong Stock Exchange (www.hkexnews.hk), the website of the Company (www.livzon.com.cn) and CNINFO (www.cninfo.com.cn).

For further enquiries or any comments or suggestions regarding this Report, please contact the Company by fax at (86) 756-8891070 or email at LIVZON_GROUP@livzon.com.cn.

* For identification purpose only

2 CHAIRMAN'S MESSAGE



2017 is a year of changes for the healthcare system in the PRC. With the continuous promotion of the new medical reform policies, the growth of production and efficiency of the pharmaceutical industry slowed down. Coupled with the pressure of drug, technique and equipment innovation, the pharmaceutical industry is undergoing a vital revolution. In order to keep up with the latest development and grasp industry opportunities, Livzon, as a national pharmaceutical enterprise with innovative strength, has established the core operation and management concept of “transformation and upgrading, standardizing development” in light of the industry opportunities and challenges. Guiding by the concept, Livzon proactively made effort in operation compliance and innovative strength, and achieved outstanding progress in terms of business performance in 2017, which laid a solid foundation for the sustainable growth in the future.

In respect of transformation and upgrading, Livzon is well aware that only by stepping up innovative initiatives continuously developing new and better products with market competitiveness, can we maintain our leading position in the industry in the “patient-centered” new era. In 2017, we speeded up the planning of our precise pharmaceutical business, strengthened the construction of MAB platform and Microsphere Center platform and achieved a number of production and clinical approvals, such as those for the newly-added package of ShenQi Fuzheng injection and Livzon MAB products. We endeavor to drive the development of innovation and transformation and promote corporate social value by carrying out research and development.

2 CHAIRMAN'S MESSAGE

Innovation is the momentum of our ongoing development and our safe operation is based on standards and rules. In 2017, we performed a series of self-check and improvement in marketing compliance, finance and taxation compliance, research and development compliance, production compliance, quality compliance and environmental compliance. In the future, we will start with information-based management and build a comprehensive informatization system comprising ERP as the core and integrated informatization platform, industry intelligence and automated operation, business intelligence and big data platform, with the view to promote standardized development with good management strategies.

While pursuing transformation and upgrading and standardizing development, we also concern about the expectations of our stakeholders and actively take up environment and social responsibility, and thus create an internal environment and external image for sustainable development. During the year, in respect of social resources cooperation and win-win outcomes, we achieved strategic cooperation with the Government of Shaoguan Municipal People's Government and Sun Yat-sen University, opening a new chapter in promoting local social development and industry-academia research cooperation. In terms of corporate management, based on the concept of green management, we attached great importance to the impact on the environment and resources at the offices, factories, headquarters, branch companies and subsidiaries, with a full implementation of the environment and social information management and collection system. Meanwhile, we completed the second unlocking of the first and reserved grant under the Restricted A Shares Incentive Scheme to share the fruits of corporate development with employees in 2017, and developed the training system with Livzon Business School as the core to continuously motivate staff development. In respect of public welfare, we have contributed to the surrounding communities, such as organizing "Walk for Love" for the fourth time in a row to provide help and care to the elderly, children and student.

Livzon is a practitioner who has been committed to human life and health. Our sales, research and production are to meet people's increasing demand for healthy living, and fulfil the expectation for sustainable social development. In 2017, Livzon has made a substantial and solid move. Looking ahead, we will be committed to "cultivating nourished lives" as always and incorporate sustainability and social responsibility in daily operation. In this way, we continue to enhance our environmental, social and governance initiatives, with the aims to achieve common prosperity and mutual success, pursue growth and share achievement with the society and environment.

Zhu Baoguo
Chairman

3 ABOUT THE COMPANY

3.1 THE COMPANY'S BUSINESS

Founded in January 1985 and headquartered in Zhuhai, Guangdong, the PRC, the Company is a comprehensive enterprise that integrates pharmaceutical research and development, production and distribution. We are among the top 50 Chinese pharmaceutical companies and a national technological innovation demonstration enterprise.

Currently, Livzon is primarily engaged in the research and development, production and distribution of pharmaceutical products. The products of the Group covered drug preparation products, bulk medicines and intermediates as well as diagnostic reagents and equipment. Major products included Chinese and Western drug preparation products such as Shenqi Fuzheng Injection (參芪扶正注射液), the Bismuth Potassium Citrate Granules (麗珠得樂 (枸橼酸鉍鉀)) series products, Anti-viral Granules (抗病毒顆粒), Urofollitropin for Injection (麗申寶 (注射用尿促卵泡素)), Menotropins for Injection (樂寶得 (注射用尿促性素)), Ilaprazole (Ilaprazole Enteric Coated Tablet) (壹麗安 (艾普拉唑腸溶片)), Voriconazole itraconazole for Injection (麗福康 (注射用伏立康唑)), Cefodizime Sodium for injection (Mouse Nerve Growth Factor for Injection) 麗康樂 (注射用鼠神經生長因子) and Leuporelin Microspheres for Injection (貝依 (注射用亮丙瑞林微球)); bulk medicines and intermediates such as Mevastatin (美伐他汀), Colistin (硫酸粘菌素), Phenylalanine (苯丙氨酸), Ceftriaxone Sodium (頭孢曲松鈉); and diagnostic reagent products such as ELISA HIV Testing Reagent (HIV抗體診斷試劑), MYCOII Testing Reagent (肺炎支原體抗體診斷試劑) and TPPA Testing Reagent (梅毒螺旋體抗體診斷試劑). Our diversified product structure and excellent product quality establish the market niche for Livzon in the pharmaceutical industry.



Product brands of Livzon

3 ABOUT THE COMPANY

In 2017, Livzon strengthened the construction of the “Double-Engine”, namely the MAB platform and Microsphere Center platform, shaping it into a major growth driver for the future development. The Microsphere Center platform has approximately 10 projects under research, covering assisted reproduction and central nervous system products, while the MAB platform has more than 10 projects under research, including various innovative drugs, such as antineoplastic and autoimmunity drugs, and biosimilars.

In recent years, Livzon has focused on the shift from a traditional pharmaceutical enterprise to “bio-pharmaceuticals + precision medicine” as a part of the strategic transformation. Livzon actively develops precision medicine and frames a precision medicine system comprising “Livzon Reagents + Livzon MAB + Livzon Shengmei + Livzon Gene”, which has laid the foundation for our future development.

3.2 THE COMPANY’S MANAGEMENT

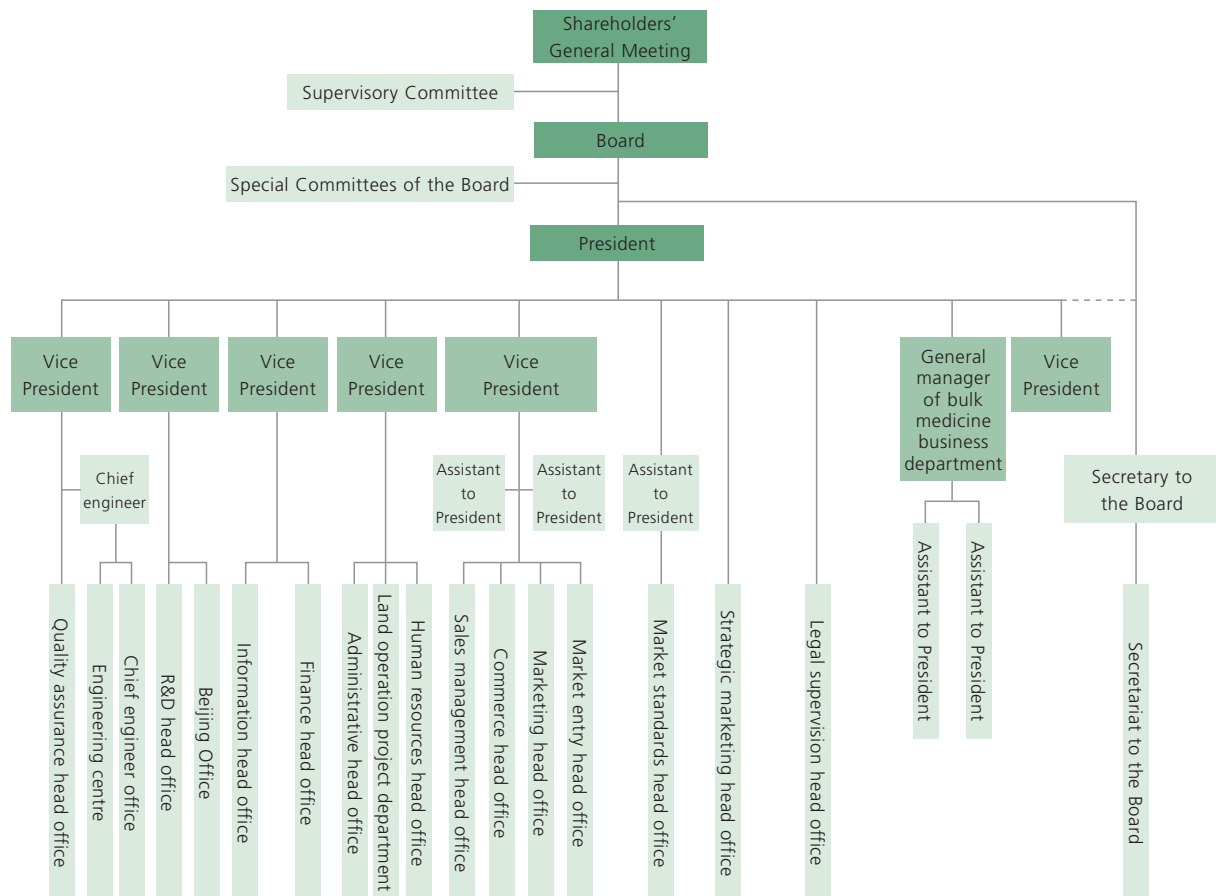
The Company standardized its operation in strict compliance with the Company Law of the People’s Republic of China, the Securities Law of the People’s Republic of China, the Stock Listing Rules of the Shenzhen Stock Exchange, the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, relevant laws and regulation of China Securities Regulatory Commission and the Articles of Association of the Company. The general meetings, meetings of the Board and meetings of the supervisory committee of the Company are convened pursuant to the requirement of the Rules of Procedures for the General Meetings, the Rules of Procedures for the Board of Directors and the Rules of Procedures for the Supervisory Committee of the Company. During the year, the decision-making and regulatory bodies of Livzon, including the general meetings, the Board and the supervisory committee, have strictly followed the requirements of the regulatory operating rules and internal system in performing management decision-making and supervision functions. The operating standards were proven to be effective. The special committees of the Board all carried out their respective duties.

The Company has set up a corporate governance structure, which is composed of the general meeting, the Board and its special committees, the supervisory committee and the senior management. As at the date of the Report, the Board comprises 10 members, including 3 Executive Directors, namely Mr. Tao Desheng (Vice Chairman and President), Mr. Fu Daotian (Vice President) and Mr. Xu Guoxiang (Vice President); 2 Non-Executive Directors, namely Mr. Zhu Baoguo (Chairman) and Mr. Qiu Qingfeng; and 5 Independent Non-Executive Directors, namely Mr. Guo Guoqing, Mr. Wang Xiaojun, Mr. Xu Yanjun, Mr. Zheng Zhihua and Mr. Xie Yun.

3 ABOUT THE COMPANY

In 2017, there is no material change in the Group's size, structure, ownership and supply chain as compared to 2016.

Organizational structure of the Group



Mission, culture and operating philosophy

Mission of Livzon

Livzon, Cultivate Nourished Lives

Culture of Livzon

Pragmatic, innovative, efficient

Operating philosophy

Adopt people-oriented strategy, serve with dedication, excel in quality and uphold integrity

Operating philosophy in 2017

Transformation and upgrading, standardizing development

MAJOR HONORS IN 2017

Award for Excellent Suppliers & Partners in International Market

China Chamber of Commerce for
Import & Export of Medicines and
Health Products
June 2017



National Technological Innovation Demonstration Enterprise

General Office of the Ministry of
Industry and Information
Technology of China
August 2017



2017 Top 20 Most Competitive Listed Pharmaceutical Companies in China

Chinese Pharmaceutical Enterprise
Association
September 2017



**2017 Top 10 Listed
Pharmaceutical Companies with
Most Investment Value in China**
Chinese Pharmaceutical Enterprise
Association
September 2017



**Top 100 Main Board Listed
Company by Value**
Securities Times, China Fund News
September 2017



2017 Top 20 Comprehensive Pharmaceutical Research and Development Strengths in China

Organization Committee of the
China Pharmaceutical R&D and
Innovation Summit
September 2017

4 2017 OVERVIEW

2017 Top 10 Biopharmaceutical Research and Development Strengths in China

Organization Committee of the China Pharmaceutical R&D and Innovation Summit
September 2017



2017 Top 50 Chinese Pharmaceutical Research and Development Brands

Organization Committee of the China Pharmaceutical R&D and Innovation Summit
September 2017



First Prize in Innovation in 2017 Zhuhai "Innovation Driven by Party Construction" Technology Competition

Organization Department of CPC Zhuhai Municipal Committee, Administration Committee of the New Economic Organization and New Social Organization of Zhuhai Municipality
September 2017



2017 Top 10 PRC Listed Pharmaceutical Companies with Most Investment Value

Chinese Pharmaceutical Enterprises Association, E Medicine Manager, Hejun Consulting
September 2017



2017 Top 20 Most Competitive PRC Listed Pharmaceutical Companies

Chinese Pharmaceutical Enterprises Association, E Medicine Manager, Hejun Consulting
September 2017



2017 Outstanding Management Team of PRC Listed Company

JRJ.com
November 2017

4 2017 OVERVIEW

Golden Bauhinia Award for Listed Companies with Most Investment Potential

Hong Kong Ta Kung Wen Wei Media Company
November 2017



19th China Patent Excellence Award (Application of Traditional Chinese Medicine Compounds in Preparing Medicines for Enterovirus 71)

State Intellectual Property Office
December 2017



11th Top 500 Chinese Brand Value

Brand Observer
December 2017



Second Prize of National Scientific and Technological Progress Award

National Committee for Science and Technology Award
December 2017



2017 Most Attractive Hong Kong Stock Connect to Mainland Institutional Investors

Yuediaoyan
April 2018



2017 Most Respected Listed Company to Investors

China Association for Public Companies
April 2018

4 2017 OVERVIEW

ENVIRONMENT

- Intensity of greenhouse gas emissions: 0.7 tonnes of CO₂ equivalent/RMB10,000 of operating income

ECONOMY/MARKET

- In 2017, the Group recorded an operating income of RMB8,530.97 million, representing a year-on-year increase of 11.49%. Net profit was RMB4,487.70 million, representing a year-on-year increase of 440.74%. Net profit attributable to shareholders of the Company was RMB4,428.68 million, representing a year-on-year increase of 464.63%;
- In 2017, the Group's research and development expenditures amounted to approximately RMB575.50 million, representing a year-on-year increase of 21.22%. The amount accounted for approximately 6.75% of the Group's total operating income for the year.

EMPLOYMENT

- Total number of employees is 6,963
- Female employees take up 44%
- Average training hours is 27.9 hours/person

COMMUNITY

- In 2017, the charitable donation expenditures of the Company amounted to approximately RMB12.5849 million
- Funds and materials donation amounted to RMB11.05 million and RMB1.5349 million respectively; 291 employees participated in voluntary activities

5.1 MANAGEMENT STRUCTURE

Pursuant to the “Environmental, Social and Governance Reporting Guide” of the Hong Kong Stock Exchange, the Board is fully responsible for the Company in terms of ESG strategy and reporting. The Board is in charge of assessing the ESG risks to facilitate the formulation of effective ESG risk management and internal control system. It also supervises all relevant departments and subsidiaries of the Company in the implementation of such measures.

The Company has established the ESG leading team, with the management as the leader, and built a multi-tier top-down ESG management mechanism with the view to further incorporate sustainability in our strategy and decision making, as well as to effectively promote sustainable development. By creating an environmental and social management system that is in line with our own business development, the Company has clear assignment of responsibility for every level and department in jointly promoting sustainable development and practices.

Overall governance structure

ESG governance level	Person-in-charge	Specific duties
ESG leadership	The ESG leadership comprises the president and top heads of relevant functions of the Company	<ol style="list-style-type: none"> 1. Steering of ESG issues 2. Formulation of ESG strategies 3. Allocation of corporate resources to support ESG initiatives 4. Approval of ESG achievements
ESG management	The ESG management is led by the Secretariat to the Board and comprises heads of various departments	<ol style="list-style-type: none"> 1. In charge of specific ESG management 2. Assignment of ESG personnel 3. Supervision of ESG progress 4. Reporting ESG performance to the leadership
ESG implementation	<div>Functions and departments at head office</div> <div>Wholly-owned subsidiaries</div> <div>Controlling subsidiaries</div>	<ol style="list-style-type: none"> 1. Collection and reporting of ESG information 2. Implementation of specific ESG tasks 3. Reporting to the ESG management

5 ESG MANAGEMENT

5.2 ANTI-CORRUPTION

The Company maintains strict compliance with the Criminal Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Company Law of the People's Republic of China, the Interim Provisions on Banning Commercial Bribery (Order of the State Administration for Industry & Commerce No. 60), the Notice on Serious Investigation and Proactive Prevention of Misconduct in Food and Drug Supervision, and other laws and regulations, while carrying out anti-graft and anti-commercial bribery works.

Besides, with the aim to communicate our anti-corruption requirements to staff, the Company has formulated and published the internal Employment Management System, the Anti-corruption and Anti-commercial Bribery Regulations and the Code of Conduct for Sales Personnel, which covered misconduct in material procurement, project construction, and the production, operation and management process. Through these measures, we enhanced the establishment of the anti-corruption system, while prevented and monitored corruption practices in our production and management process. In addition, key employees and partners are required to execute the Undertaking on Anti-corruption and Anti-commercial Bribery according to the actual circumstances. It is also expressly stipulated that employees in breach of the undertaking will be punished by termination of employment contract and serious cases will be reported to law enforcement.

In addition to strengthening the establishment of system, the Company also developed the internal audit system in line with corporate development. The Company has set up the Audit and Integrity Department, which is under the market standards head office and independent of other departments, and put it in charge of the audit of business units of the Group. The Company has designated audit professional to conduct the comprehensive and special audit of each subsidiary of the Group, the exit audit of management personnel for 2017 and to organize and complete the internal audit, rectification and investigation of the subsidiaries of the Group. Currently, the Company is dedicated to enhancing and optimizing the risk management and internal control system. Meanwhile, we are moving towards more professional, procedural and normative internal audit. The Company launches self-assessment on risk management and internal control annually, and engages third parties for internal control audit. Besides, the Company keeps improving the establishment of system for building an internal audit system that fits its development, so as to push forward and optimize the risk control system as well as the internal control system.

The Company achieved outstanding results in anti-corruption governance. There was no litigation regarding corruption against the Company or its employees in 2017.

5.3 IDENTIFICATION AND COMMUNICATION OF STAKEHOLDERS

Based on stakeholders' concern, the Company has established a long-term communication mechanism for stakeholders. We aim to maintain good interaction with all stakeholders and actively respond to their expectations through targeted and diverse communication channels, thereby promoting our sustainable development.

Stakeholders identified	Purpose of communication	Communications channels
Government departments	<ul style="list-style-type: none"> Comply with relevant laws and regulations, and ensure quality and safety of drugs Cooperate with the regulatory work of the government in supporting healthy industrial development Ensure tax compliance and promote local economic development 	<ul style="list-style-type: none"> Meetings between the government and the corporate sector Supervision and inspection Work reports and studies
Shareholders	<ul style="list-style-type: none"> Understand the operating results, governance standards and stringent risk control measures of the Company Ensure steady operation to maximize investment return Facilitate open, fair and equal information disclosure 	<ul style="list-style-type: none"> General meetings Investor conferences and on-site visits Regular updates on operating information and data Face-to-face interviews, teleconferences and online interactive platform
Employees	<ul style="list-style-type: none"> Safeguard the basic rights of employees Care for employees' physical and mental wellbeing and safety Understand employees' needs and their suggestions to the Company Provide training and career development platform 	<ul style="list-style-type: none"> Staff representative meeting and trade union Staff satisfaction survey Occupational, health and safety training Opinion and feedback platform Daily communication and visits

5 ESG MANAGEMENT

Stakeholders identified	Purpose of communication	Communications channels
Consumers	<ul style="list-style-type: none"> • Protect consumer rights and uphold business ethics • Ensure drug quality and safety, timely recall of defective products • Protect the rights of customers and consumers 	<ul style="list-style-type: none"> • Product labelling and information disclosure • Client visits • Consumer satisfaction survey • Address complaints and opinions of consumers
Partners and suppliers	<ul style="list-style-type: none"> • Maintain good and stable cooperation relationship • Operate with integrity and ensure the drugs are compliant with the standards • Timely communication and coordination with upstream and downstream players to achieve mutual benefits 	<ul style="list-style-type: none"> • Regular exchange and communication • Working meetings, phone calls and correspondences • Company website
Media	<ul style="list-style-type: none"> • Maintain open and transparent information disclosure • Keep good interaction with media 	<ul style="list-style-type: none"> • Phone interview and correspondences • Featured articles
Industry peers	<ul style="list-style-type: none"> • Fair competition among peers to promote healthy industrial development • Sharing of technology and experience among enterprises 	<ul style="list-style-type: none"> • Meetings of industry organizations • Sharing sessions • On-site visits and exchanges

Stakeholders identified	Purpose of communication	Communications channels
Local community	<ul style="list-style-type: none"> Emphasize the impact of manufacturing and operation activities on the local community Drive local economic development and provide assistance to the disadvantaged groups Promote health education and help patients Enhance recycling of product packaging and waste to reduce pollution 	<ul style="list-style-type: none"> Participate in community welfare events Provide regular assistance to the local community Organize health campaigns Join volunteer groups

5.4 MATERIAL ISSUES AND LIST

The Company has engaged external professional consultants to review and assess its sustainability issues for the year. From the stakeholders' perspective, the consultant summarized and concluded the sustainability issues that are material to the Company as the basis of preparation of this Report.

Materiality assessment process

- Review the results of materiality assessment for 2016: evaluate the reasonableness and suitability of the results for 2016 combined with the overall business development of the Company in 2017.
- Formulate and implement the stakeholder engagement program for the year: based on the Company's own circumstances and with reference to the development of the medical sector and the economy and society as a whole in the year, organize communication and studies with major stakeholders to obtain relevant original data.
- Consolidate and quantify the results for two years and perform assessment from two perspectives: taking into account of the results for both years, evaluate each issue from two perspectives, namely the "Assessment of Internal Materiality to the Enterprise" and "Assessment of Materiality to Industry Peers and Media", so as to compile the list of material issues.
- Submit the report to the management and obtain approval: submit the report on overall stakeholder engagement and material issues assessment to the management and obtain approval from the management.

5 ESG MANAGEMENT

List of material issues

Degree	Item	Material issues
Issues of high materiality	1	Product quality and safety assurance
	2	R&D innovation and protection of intellectual property rights
	3	Anti-corruption compliance operation
	4	Information disclosure
	5	Development and training of employees' abilities
	6	Protection of consumer rights
	7	Occupational health and safety measures
	8	Control of energy consumption
Issues of medium materiality	9	Investment to community development
	10	Pollution treatment and emission reduction
	11	Growth of sustainable value
	12	Remuneration package and fair competition
	13	Proper waste disposal
	14	Reduction of greenhouse gas emission
	15	Governance enhancement
	16	Charitable donation
	17	Enhancing water use efficiency
	18	Employment compliance
	19	Protection of consumer privacy
	20	Supply chain management
	21	R&D cooperation

6 REPORT ON RESPONSIBILITY

The year 2017 was full of opportunities and challenges for the pharmaceutical industry. While the sector proceeded with the reform, the control on medical insurance fees and lower bid price caused prolonged effect on the whole industry, and the introduction of priority review, adjustments to the medical insurance catalogues, consistency evaluation and the negotiation list will also have profound implications. Against the backdrop of evolving policies and complicated market environment in the pharmaceutical industry, the Company focused on the management approaches of “Transformation and upgrading, standardizing development” in the year. Through early planning, early transformation and early compliance works, we adapted to major policy changes in the pharmaceutical sector, enhanced management and control efficiency and governance standard, and improved our core competitiveness on an ongoing basis.

6.1 STANDARDIZED DEVELOPMENT AND COMPLIANT OPERATIONS

“Standardization is the basis of ensuring safe operation” and we believe that operation compliance is the only key to long-term growth. Adhering to the internationalization strategy, the Company follows national standards and European and American standards in pursuit of regulated development. We constantly optimizes hardware and software development, maintains compliance in R&D, manufacture and sales, and continuously strengthens our own informatization development.

Hardware regulations: Livzon Industrial Park that meets international standards



In terms of the hardware, Livzon Industrial Park of the Company was designed based on the standards adopted by the USA FDA and European Union with the aim of becoming a domestically-leading and world-class modern pharmaceutical production base. The establishment of Livzon Industrial Park facilitates the transition of the Company to Industry 4.0. The park has a site area of 427,000 sq.m. and approximately RMB2.3 billion has been invested. The automatic warehouse system and smart manufacture are its greatest strengths.

Our advanced international process design and automatic production lines, such as the automatic loading and unloading production line for lyophilized preparations and the 3D production line for solid preparations, have become the new benchmark of the pharmaceutical industry. Through the interconnection between and excellent application of ERP, WMS, MES, LIMS and other information systems, we achieved information-based management and control for all processes including sales order, manufacturing plan, procurement of inventory, storage and delivery, manufacture management, quality control, product inspection and storage of finished products. This not only enhanced product quality, but also boosted manufacturing efficiency and lowered production cost. As to environmental protection and energy saving, the wastewater produced at Livzon Industrial Park is biochemically treated and sterilized before applying to firefighting and circulating cooling purposes.

6 REPORT ON RESPONSIBILITY

Software establishment: compliant operations and informatization construction

In 2017, the Company accelerated the compliance development by capitalizing on refined management as the means and the integrated information platform as the vehicle, with the view of bringing our management standard to the next level.

In terms of compliant operations, the Company launched a series of self-inspection and enhancement initiatives in marketing, financial and taxation, R&D, production, quality and environmental protection compliance in 2017. Regarding informatization construction, the Company has devoted considerable human resources, material resources and financial resources into the construction of informatization projects in 2017. The Company has set up the informatization construction committee, strengthened construction of informatization infrastructure, pushed forward the transition of Livzon to Industry 4.0 and enhanced our decision-making, management and industrial intelligence. Informatization construction projects of the Company included:

- Build and optimize the fully integrated multi-system informatization platform with ERP and the Company as the center of control;
- Achieve centralized management of business flow, financial flow and data flow;
- Enhance the decision-making, management and industrial intelligence of the Company;
- Optimize business process to boost industrial automation in manufacturing enterprises;
- Establish the business intelligence and big data platform of the Company.

The Company will complete the establishment of the informatization system in three phases. In 2017, we focused on the internal operation and management system and commenced the building of infrastructure. In 2018, we will pursue horizontal expansion and vertical exploration for the systematic optimization of the value chain enhancement and synergy platform. In 2019, we will implement full planning and control of the entire informatization construction system.

6.2 TRANSFORMATION AND UPGRADING FOR AN INNOVATIVE FUTURE

“Innovation is the momentum of our ongoing development”. Since its establishment more than 30 years ago, Livzon has driven its development through innovation. R&D innovation helps us to adapt to the changing market and only by continuously developing products with market competitiveness, can we stand at the forefront of the industry and market. Through the establishment of innovation platform and talent team, more input in innovation and continuous product development and research, we accelerated corporate transformation and upgrading, strategically transformed from a traditional pharmaceutical enterprise to “bio-pharmaceuticals + precision medicine”, and played the role as a socially responsible enterprise.

6 REPORT ON RESPONSIBILITY

R&D innovation platforms

Livzon currently owns 3 national-level technical centers:

- National-Certified Enterprise Technology Center
- National Chinese Traditional Medicine Modern Engineering Technology Research Center
- National-Local Joint Research Center for Long-term Microsphere

9 provincial-level R&D centers:

- Chinese Medicine Digitalization Engineering and Technology Research and Development Center of Guangdong Province
- Livzon Pharmaceutical Key Engineering and Technology Research and Development Center of Guangdong Province
- Pharmaceutical Fermentation Engineering and Technology Research and Development Center of Guangdong Province
- Shanghai Biotechnology Research Center
- Livzon Group Livzon Pharmaceutical Factory (Provincial-Level Enterprise Technology Center)
- Zhuhai FTZ Livzon Hecheng Pharmaceutical Manufacturing Co., Ltd. (Provincial-Level Enterprise Technology Center)
- Zhuhai Livzon Diagnostic Reagents Inc. (Provincial-Level Enterprise Technology Center)
- Livzon Group Sichuan Guangda Pharmaceutical Manufacturing Co., Ltd. (Provincial-Level Enterprise Technology Center)
- Livzon Group Fuzhou Fuxing Pharmaceutical Co., Ltd. (Provincial-Level Enterprise Technology Center)

Three core research and development institutions:

- Chemical and pharmaceutical research institute
- Chinese medicine research institute
- Livzon MABPharm Inc. ("**Livzon MAB**")

6 REPORT ON RESPONSIBILITY

Investment in research and development

During the year, the Group had a total of 586 research and development staff (2016: 356 staff), representing a year-on-year increase of 64.61%. The amount accounted for 8.42% of total employees (2016: 5.65%). The Group's research and development expenditures totaled approximately RMB575.50 million (2016: RMB474.78 million), representing a year-on-year increase of 21.22%. The amount accounted for approximately 6.75% of the Group's total operating income for the year.

Government funding for research and development

- "Traditional Chinese Medicine Injections Advanced Manufacturing Technologies Standard and Application (中藥注射劑大品種先進製造技術標準驗證與應用)" was granted RMB20 million under the grants for "projects conducting industrial transformation and upgrading (Made in China 2025) (工業轉型升級 (中國製造2025) 項目資金)" by the Ministry of Industry and Information Technology in 2017.
- "Common Key Technological Research and Development of New Drug Preparation on Commercialisation of Long-acting Release Microspheres (長效緩控釋微球產業化共性關鍵技術與創新製劑研發)" was granted RMB12.7849 million under "National Major Innovative Drug Projects for 2017 (2017年國家重大新藥創製項目)".
- "Long-acting Release Innovative Drug Preparation Development and Commercialisation Team (長效緩釋創新製劑的研發與產業化團隊)" was granted RMB10 million under the grants for innovative team of "Talent Plan Application of Pearl River (珠江人才計劃)" in 2016.
- 5 projects were qualified for "Major Scientific and Technological Achievement Commercialisation Project in Guangdong Province (廣東省重大科技成果產業化專項)", in which, "Commercialisation of Liquid Biopsy Testing Enriching, Extracting and Separating Equipment (液態活檢樣本提取富集分離設備產業化)" was funded RMB30 million; "Technology Transfer of Blood Screening (BCI) Nucleic Acid Detection Testing (血液篩查(BCI)核酸檢測試劑成果轉化)" was funded RMB6 million; "Commercialisation of Longterm Microsphere Drug Production (長效微球製劑的產業化)" was funded RMB30 million, "Innovative drug of Ilaprazole phase IV clinical research (co-investment project with the State) (創新藥物艾普拉唑IV期臨床研究 (國家跟投項目))" was funded RMB11.21 million, "Commercialisation Project of Ilaprazole Sodium Injection (注射用艾普拉唑鈉產業化項目)" was funded RMB29.10 million.
- "Technological Upgrade Project for Productivity and Efficiency Enhancement of Laboratories (質檢中心擴產增效技術改造項目)" was subsequently granted RMB10.2602 million under technical transformation special fund of Guangdong Province.
- "Commercialisation and Technical transformation Project of Mouse Nerve Growth Factor for Injection (注射用鼠神經生長因子產業化技術改造項目)" was subsequently granted RMB24.1967 million under industry and enterprise technical transformation special fund of Guangdong Province.
- "Research and Commercialisation Team of Innovative Long-acting release new drug preparation (長效緩釋創新製劑的研發與產業化團隊)" was granted RMB5 million under the fund for innovation team in Zhuhai City in 2016.
- "Technical transformation project of Shenqi Fuzheng Injection with flexible bag (軟袋參芪扶正注射液技術改造項目)" was funded RMB10 million under the grants for Technological Innovation Projects of One Enterprise, One Policy.

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

In 2017, while pursuing research and innovation, Livzon also actively engaged in industrial exchange and facilitated industry-academia research cooperation. Focusing on all upstream and downstream partners, we aimed at creating value for the local economy, industry and partners, thereby achieving win-win outcome.

7.1 INNOVATIVE DEVELOPMENT

In 2017, the Company promoted its transformation and upgrading by continuously improving innovative capability, strengthening research of key technology and new product development in the pharmaceutical industry and enhancing its core competitiveness. On the other hand, the Company actively strengthened the protection of intellectual property rights by active participation and collaboration with industry peers, in order to protect intellectual property rights and combat counterfeiting and substandard products.

7.1.1 Ongoing technological and research innovation

Livzon is always motivated to pursue creative thinking and creative products. In respect of construction and maintenance of product innovation system, the Company established the cross-disciplinary and multi-tier research structure in accordance with scientific research development strategy and planning. Through the optimized system, streamlined organizational structure, reasonable and effective incentive system and close industry-academia research cooperation, the Company ensures the orderly development of significant new products and new technique and attaches importance to the technological advancement of the existing products.

Under the new policy for pharmaceutical products, the Company standardized and optimized the construction of the research and development system in the following four areas: (1) In order to encourage the R&D personnel to be enthusiastic, active and creative, the Company established incentive schemes for the R&D personnel and stipulated management requirements for technical roles, so as to enable the Company to grow bigger and stronger and achieve sustainable development, while motivating the R&D personnel to develop market-oriented products with a long-term systematic incentive mechanism. (2) The Company intended to shorten research and development cycle through information technology, so as to enhance research and development efficiency and accelerate the development of information technology for scientific research. (3) Aiming at further deepening and standardizing the internal management of research and development projects, the Company established the performance assessment committee for early intervention which ensured the success of product development. (4) To ensure the new products obtaining good application outcome, the Company formulated the project reporting system so as to facilitate the industrialization of the research and development project.

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Major scientific research and innovation achievements in 2017

1. Ilaprazole Sodium Injection (注射用艾普拉唑钠) and bulk medicines have obtained approval for production.
2. New indications of Ilaprazole Enteric Coated Tablet (艾普拉唑肠溶片新适应症) have obtained approval for production.
3. The supplemental application of multi-layer coextrusion film packaging for Shenqi Fuzheng Injection (参芪扶正注射液增加多層共擠輸液用膜制袋包裝) was approved for production and has been prepared for commercialized production.
4. Recombinant Humanised Anti-tumor Necrosis Factor α Monoclonal Antibody for Injection (注射用重組人源化抗人腫瘤壞死因子 α 單克隆抗體) achieved progress in Phase II clinical trial.
5. The clinical research of Recombinant biosimilar human chorionic gonadotropin (rhCG) for injection (注射用重組人絨促性素(rhCG)) has completed Phase I clinical trial, and has achieved progress in Phase III clinical trial.
6. Recombinant Human/Mouse Chimeric Anti-CD20 Biosimilar Monoclonal Antibody (重組人鼠嵌合抗CD20單克隆抗體) is undergoing Phase I clinical trial.
7. Recombinant anti-HER2 humanized monoclonal antibody for injection project (重組人源化抗HER2單克隆抗體注射液項目) is undergoing Phase I clinical trial.
8. Recombinant humanized anti-PD-1 monoclonal antibody (重組人源化抗PD-1單克隆抗體) is undergoing Phase I clinical trial in the U.S., Phase I clinical trial in China has proceeded to the ethics board and is pending for approval, which represents another breakthrough of Livzon in expanding the international market.
9. Recombinant Anti-RANKL Monoclonal Antibody (重組全人抗RANKL單克隆抗體) has obtained clinical application to prepare for Phase I clinical trial.
10. Triptorelin Acetate Microspheres (醋酸曲普瑞林微球) (1 month) Sustained-Release project has obtained approval for clinical application and is in the preparation of clinical trial-related work.
11. LiquidBiopsy® has filed for Type I products in accordance with the latest classification requirement of China Food and Drug Administration, and has obtained certificates for Type I-medical equipment and has been put into production.
12. In respect of bulk medicines, with antidiabetic, chronic bronchitis treatment, new antibiotics and high end veterinary medicines, the Company has established a clear R&D product pipeline.

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

7.1.2 Intellectual property protection

Livzon maintains strict compliance with relevant requirements of the Patent Law of the People's Republic of China, the Trademark Law of the People's Republic of China and the Copyright Law of the People's Republic of China. Livzon is endeavored to safeguarding the legal rights of corporates and brands, maintaining drug safety for the public and upholding order in the pharmaceutical market. Meanwhile, we corporate closely with government authorities and join hands with industry peers and other organizations to combat counterfeit drugs and protect intellectual property.

The Company puts the market standards head office in charge of market monitoring. The department conducts regular inspection of the Eastern Guangdong region and the Anhui Huayuan market twice a year, where it acts on behalf of the Company in curbing counterfeit drugs in the market and safeguarding intellectual property rights. By taking stringent actions against counterfeiting, infringement of rights and adopting anti-counterfeit labels, the head office maintains integrity of the pharmaceutical market for the Company. At the same time, the department keeps a firm hand on the circulation and sales of in-house products in the market and severely punishes cross-territory sales and malpractices.

Case Sharing: Anti-counterfeiting Meeting at Shilong

On 11 December 2017, Livzon fully cooperated in, facilitated and supported the 12th Shilong Online Anti-counterfeiting of Foods and Drugs Coordination Meeting at Zhuhai. With the theme of "focusing on online drug and food safety and establishment of new online defense line against counterfeiting", the meeting centered on online drug and food safety, and invited food and drug administrative authorities, public security authorities, judicial authorities across the country and the public to discuss food and drug safety governance model and major challenges. The event aimed to promote joint governance of public food and drug safety based on internet economy, thereby establishing a new online defence line for food and drug safety.



Anti-counterfeiting Meeting at Shilong

7.2 PROFIT-MAKING INDUSTRY

In pursuit of steady development, we also seek in-depth exchange and cooperation with local government, partners, industry peers and high schools. We actively explore opportunities for industrial innovation and keep abreast of the international market, so that we can achieve mutual prosperity with the PRC pharmaceutical industry.

7.2.1 Supporting local economy

While we strengthen our own business, we bear in mind our corporate social responsibility. Thus, we cooperate with local governments and strategically position our R&D centers and manufacturing factories to boost economic output of the neighboring communities. We are endeavored to bring sustainable development of the local pharmaceutical industries and enhance earnings for people in the areas.

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Strategic Cooperation Framework Agreement between Shaoguan People's Government and the Company

On 20 April 2017, the Company and Shaoguan People's Government entered into the strategic cooperation framework agreement at our headquarters. Pursuant to which, Livzon and the Municipal Government of Shaoguan City will fully cooperate in developing Livzon Group Limin Pharmaceutical Factory ("Limin Factory") as the main force factory in the R&D and manufacture of Chinese medicine in Shaoguan. The Limin Factory will constantly develop and introduce new drug products, launch technical renovation in an organized manner, boost production capacity, carry out transformation and upgrade on an ongoing basis, and will establish a new and modern R&D and manufacturing base for intravenous infusion solution of traditional Chinese medicine in Shaoguan. The strategic cooperation framework agreement was entered into by the Company and the government on the basis of "equality, honesty, mutual benefits, joint development and win-win", with the aim of facilitating in-depth cooperation in all aspects of economic development and restructuring in Shaoguan.



Livzon signing contract with the Municipal Government of Shaoguan City

7.2.2 Participating in industrial exchange

Livzon actively carries out cooperation with various parties, explores new opportunities in the industry, seeks profit margin in the sector and keeps itself abreast of the latest developments in order to create a better tomorrow for the industry.

Case Sharing: Pharmaceutical Business Elite Sharing Meeting

In order to facilitate the communication and exchange within the pharmaceutical industry, as well as creating an environment of mutual cooperation and mutual benefit, the Company invited pharmaceutical business elites in China to attend the Pharmaceutical Business Elite Sharing Meeting in March 2017. Participants, including representatives of renowned pharmaceutical enterprises such as Sinopharm, CR Pharmaceutical, Shanghai Pharma, Guangzhou Pharmaceuticals and Jointown, gathered to visit the Livzon Industrial Park Exhibition Center and automated high-bay storage in our Pharmaceutical Factory, where they gained insights of Livzon's Industry 4.0 initiatives and shared thoughts and experience related to industry development.



Sharing Meeting

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Cooperation and Exchange Meeting between Livzon and Sinopharm

On 14 March 2017, the Cooperation and Exchange Meeting between the Company and Sinopharm was convened at the Company for the purpose of expanding cooperation and mutual development. The meeting presented an overview of the current cooperation and future potential development between the Company and Sinopharm, with an analysis on the prospect of expanding cooperation and mutual development. Both parties looked forward to the bright future of industry development and expressed their vision of maintaining close cooperation.



Exchange Meeting between Livzon and Sinopharm

Case Sharing: Senior Management of Fosun Pharma visiting Livzon Industrial Park

On 28 July 2017, the senior management of Shanghai Fosun Pharmaceutical (Group) Co., Ltd. ("**Fosun Pharma**") and Guilin Pharmaceutical Co., Ltd. visited Livzon Industrial Park, and conducted exchange seminars on the construction and management of the industrial park. By visiting the Livzon Industrial Park Exhibition Center, the visitors acquired in-depth understanding of Livzon's development history in over 30 years and its future development strategy. Our guests also visited the intelligent logistics system and automated production line of Livzon Group Livzon Pharmaceutical Factory ("**Pharmaceutical Factory**"). Livzon Industrial Park received high praise from the visitors for its high standard of construction and intelligent production.



The senior management of Fosun Pharma visiting Livzon

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

7.2.3 Seizing innovative opportunity

The Company is well aware that the world changes at increasing speed, and pharmaceutical enterprises need to broaden the horizon and strengthen internal and external communication to keep up the pace. On top of its foundation, the Company strives to establish an exchange platform which serves as a communication and contact point for various parties to achieve information sharing. By continuously monitoring the deepening of the reform plan for the medical and health system, focusing on the connections between the world trend and pharmaceutical industry, and exploring the new changes brought by the AI technology to the industry, the Company breaks the bottleneck of the industry and brings more possibilities while keeping abreast of the latest trends to promote sustainable development of the pharmaceutical industry.

Case Sharing: Embracing Pharmaceutical Internet Livzon marching to the new era

As the State implemented the “Internet+” strategy and the “13th Five-year” Plan, the healthcare reform proceeded and would surely have a profound effect on the traditional pharmaceutical services mode while providing new room for the development of pharmaceutical services. In view of this, the “Internet+ Pharmaceutical Services Innovation Forum” was hosted by China Pharmacy Journal and the Chinese Medicine Pharmaceutics and Pharmacology Professional Committee of Guangdong Provincial Association of Chinese Medicine with Livzon as its first co-organizer at Zhuhai, Guangdong Province on 20 May 2017. With the theme of “Internet+ Pharmaceutical Services”, the forum explored current affairs such as how to leverage the professional value as pharmacists, position of pharmacists and the ways to enhance their work skills in the era of “Internet+”.



Innovation Forum

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Times make the man – Livzon's visit to Tencent and Huawei

On 21 August 2017, in the name of Livzon Business School, Tao Desheng, the president of the Company and the dean of Livzon Business School, organized and personally led the tour to Tencent and Huawei, encouraging the middle and senior management of the Company to participate in cross-industry visits. The cross-industry visit have inspired Livzon's employees to think out of the box in corporate management and operation, and motivated them to capture development opportunities of "Internet+ Biotechnology" arising from the emergence of Artificial Intelligence technology.



The study tour

Case Sharing: International Exchange – US company Longhorn visiting Livzon

On 4 August 2017, representatives from Longhorn Vaccines and Diagnostics LLC, a US company, visited the Pharmaceutical Factory, exhibition center and traditional Chinese medicine herbarium and the laboratory of Zhuhai Livzon Gene Detection Technology Co., Ltd. ("Livzon Gene"). During which, the professionals visited four departments including the liquid biopsy, immunity, fluorescent PCR and high-throughput sequencing at the medical examination laboratory of Livzon Gene. The laboratory setting and technology platform of Livzon Gene was highly praised by the professionals, who stated that it was one of the most advanced laboratories they had ever seen and they were looking forward to the next in-depth exchange.



Longhorn visiting Livzon

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

7.2.4 Facilitating school-enterprise cooperation

Nowadays, enterprises are expected to engage in school-enterprise cooperation as part of their social responsibilities. It is also an important way to improve the quality of talents in the industry and achieve win-win results between institutions and the enterprises. In 2017, Livzon has established closer communication with tertiary institutions through further school-enterprise cooperation.

Case Sharing: The opening of the School of Pharmaceutical Sciences, Sun Yat-sen University – Livzon Teaching Laboratory Base

On 11 June 2017, the inauguration ceremony of the School of Pharmaceutical Sciences, Sun Yat-sen University – Livzon Teaching Laboratory Base was held at Livzon MAB in the Livzon Industrial Park. Fu Daotian, the Vice President of the Company, and Bi Huichang, the Associate Dean of the School of Pharmaceutical Sciences of Sun Yat-sen University, entered into the cooperative agreement and organized the opening ceremony of the Teaching Laboratory Base.

Enterprises need talents with solid skills and schools need well-established teaching laboratory base. Livzon has a leading R&D and production platform in China, which gathers international and domestic high-end R&D talents, while the School of Pharmaceutical Sciences of Sun Yat-sen University is a leading pharmaceutical school in China, with a focus on cultivating comprehensive talents with integrity and professional competence, patriotic sentiment and new drug R&D capacity.

The establishment of the Teaching Laboratory Base is an effective way to achieve mutual communication and win-win situation between the school and Livzon, which facilitated the advancement of industry-academia research integration and opened up a new chapter in industry-academia research development.



The inauguration ceremony of the Teaching Laboratory Base

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: 1st “Visit to Livzon by doctoral students of renowned universities”

On 7 July 2017, more than 40 guests and doctoral students from 7 renowned universities, including China Pharmaceutical University, Shenyang Pharmaceutical University, Fudan University, Zhejiang University, Sichuan University, Sun Yat-sen University and the Research Institute of Shanghai Pharma, visited Livzon Industrial Park, where they had first-hand experience of Livzon’s journey over the past three decades and visited the exhibition center, traditional Chinese medicine herbarium, intelligent high-bay warehouse and Livzon MAB laboratory.

The “Visit to Livzon by doctoral students” was organized by the human resources head office of the Company, with the aims of “establishing exchange platform between the students and enterprises in collaboration with the institutes, seeking for more in-depth industry-academia research cooperation, opening up the students’ career horizons and cultivating them into talents of the modern pharmaceutical industry”.

The senior management of the Company had in-depth exchange and interaction with the doctoral students, showing that Livzon is a pragmatic, innovative, and efficient enterprise which embraces different opinions for improvement, treasures talents and is dedicated to serving the country.



Visit to Livzon by doctoral students of renowned universities

Case Sharing: Livzon and China Pharmaceutical University joined hands for the establishment of the Liquid Biopsy Joint Laboratory

Livzon and China Pharmaceutical University entered into the agreement in relation to the establishment of the “Liquid Biopsy Joint Laboratory For Critical Illnesses” and organized the opening ceremony in the morning on 13 October 2017. The parties will leverage the comprehensive solution of Zhuhai Livzon Cynvenio Diagnostics Ltd. for the capture of circulating tumor cells and molecular diagnostics, together with the solid capability of China Pharmaceutical University in terms of pharmaceutical products and clinical trial, in order to cooperate in the scientific research for the diagnosis, treatment, and drug development of malignant tumors such as colon cancer, lung cancer, and breast cancer. Both parties will capitalize on their respective professional strengths and facilitate talent exchange and interaction, with a dedication to building the joint laboratory into an influential platform for medical research in Jiangsu Province and in the state.



The signing ceremony of Livzon and China Pharmaceutical University

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Summary of collaboration activities between Livzon and universities in 2017

Livzon sponsored the first academic forum for postgraduates of medical and pharmaceutical universities in China in May 2017.



The forum

The opening of the School of Pharmaceutical Sciences, Sun Yat-sen University – Livzon Teaching Laboratory Base in June 2017.



The open ceremony

Livzon organized the first visit to Livzon by doctoral students of renowned PRC universities in July 2017.



The visit

The "Livzon's Products as Bright Pearls" Summer Camp at Livzon was organized by Shenyang Pharmaceutical University in July 2017.



The Summer Camp

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

The faculty management of Chongqing University visited Livzon and organized seminars on school-enterprise cooperation in November 2017.



The visit

In December 2017, Livzon and Hubei University of Science and Technology entered into the agreement in relation to the base for internship and learning.



The signing ceremony

7.2.5 Supply chain management

The sustainable development of the Company is inseparable from the support of the suppliers which are closely linked to our product and service quality. Livzon is dedicated to establishing long-term, healthy and mutually-benefitting cooperation relationship with the suppliers and all business partners.

Supplier management system

In order to establish a standard management procedure for the audit and approval of materials supplier and to ensure that the purchased materials are in compliance with the standards to secure product stability, the Company established the standard management procedure for suppliers, which is applicable for supplier management in areas of raw materials, packaging materials, reagents and consumables used for production. The procedure stipulates the audit responsibilities of each department, provides detailed classification on suppliers and materials, adds new process for assessment and approval of materials suppliers and sets forth detailed requirements for the preliminary selection, audit, approval, appointment and change of suppliers.

In addition, the Company formulated the Audit and Management Protocol for Suppliers and the Operating Manual for On-site Quality Audit of Suppliers to provide guidance for supplier audit and check, and to ensure that the audit work is scientific and effective and the results of which are reliable. Meanwhile, we have prepared the List of Qualified Material Suppliers and the List of Longlisted Material Suppliers for convenient and effective retrieval and review of supplier information, thereby achieving refined management on supplier portfolio.

7 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

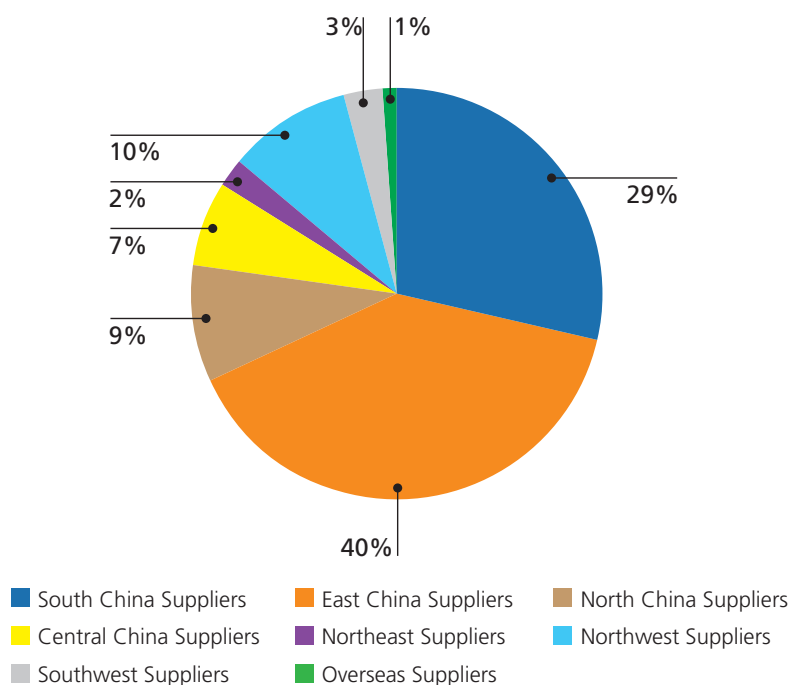
Responsible procurement system

Knowing the importance of responsible procurement system, Livzon established the Management Measures on Material Procurement, which optimizes the selection and approval of procurement method, refines procedures for tender and procurement, introduces application and procurement requirement for fixed assets and production materials, as well as conducts supervision and examination on violations of materials management to prevent corruption and misconduct.

The Company also established the Material Management System, defining the warehouse management requirements for purchased materials and standardizing materials management, so as to ensure product quality and supply and enhance overall corporate economic efficiencies.

Livzon is willing to shoulder its social responsibility with the suppliers in promoting standardization and institutionalization of supply chain management and creating a sustainable supply chain.

Table: Livzon's Suppliers by Location in 2017



8 ENHANCING QUALITY AND UPHOLDING SAFETY

Craftsmanship is the essence of quality. The pursuit of excellence is at the heart of craftsmanship and customer satisfaction is the aim of quality assurance. In 2017, the Company continued to uphold the lifeline of product quality. We have established major user awareness and offered effective and supreme products to doctors and patients. Apart from drug quality and user safety, the Company also places great importance to staff health and safety. We regard production safety as the red line that cannot be crossed and put priority on employees' health and safety.

8.1 ENHANCING QUALITY

Providing better products for customers is a long-standing mission of Livzon. Livzon has established a comprehensive management system for product quality responsibility and exercised strict control over every aspect of pharmaceutical manufacturing. We also give due consideration of customers' needs and optimize the customer service and complaint handling mechanism to deal with clients' feedback and suggestions, so that they can enjoy safe and effective products and services.

8.1.1 Quality assurance document

To ensure quality assurance is in place and product responsibility is fully and consistently executed, the Company established the Quality Management System, Standard Operating Procedure and other stringent rules, which covered drug R&D, clinical research, commercial production and other aspects. As a result, quality assurance works can be carried out in an orderly manner.

The Company is committed to product effectiveness, safety, stability and consistency, and strives to ensure product quality. In accordance with the Pharmacopoeia of the People's Republic of China and other relevant quality standards, we fully inspect every product batch for each quality control inspection item. Thus, products are put up for sales only when the product quality requirements are satisfied. At the same time, the Company implemented the authorized quality personnel system. The authorized quality personnel is in charge of the release of each product batch and only releases products after reviewing all aspects of product manufacturing process and making sure that the quality of products to be delivered meets the Good Manufacturing Practice and other relevant regulations. The quality assurance head office collects quality information and product quality complaints from all subsidiaries of the Company on a regular basis, and uses such data to form report for submission to the management.

Livzon is the pioneer in promoting the quality (laboratory) management system nationwide. We keep in line with and even exceed national standards, while strictly monitoring processes from R&D to commercial production. This defines "the reassuring medicines produced by Livzon".

8.1.2 Creating high-quality products

The Company builds a quality culture of "integrity, truthfulness and accuracy". Centering on the two management cores, namely the "comprehensive prevention of product quality risk and comprehensive prevention of system risk", we focus on "daily settlement" as our main task. Through quality audit, risk investigation and elimination, supervision and rectification, we promote the sound operation of quality management system, so as to prevent systematic risks in product quality and eliminate material quality accidents or crisis.

8 ENHANCING QUALITY AND UPHOLDING SAFETY

The year 2017 was crucial to the development of our quality system. During the year, the Company pursued reliability of data as the core target, put emphasis on reliability of data from R&D to production process, and ensured operation compliance of all businesses. Meanwhile, the Company proposed the following requirements in terms of the management of the quality system:

1. Internationalization: The Company took a forward-looking approach and brought forward the internationalization goal for the internal quality system based on the development trend in the future;
2. Business extension: The Company extended quality monitoring of each subsidiary into upstream and downstream sectors, which gradually covered all subsidiaries of the Company and the entire lifecycle of drug products. We added quality management audits for Chinese medicine manufacture at two Chinese herbal medicine plantation bases and quality management audits for pharmaceutical operation of three companies, achieving the full coverage of quality monitoring for the entire industrial chain;
3. Diversity: The quality assurance head office of the Company kept up with the changes in the current pharmaceutical market and policy. On top of regular and routine quality audit, it added spot check audit and special quality audit to improve effectiveness of quality monitoring.

During the year, the Company adhered to the principle of “quality first”. We continued to strengthen the quality control over the whole process of production, sales and R&D. The Company has maintained good production and operation quality in general and no major environmental accident, safety accident and occupational health accidents occurred in our subsidiaries.

In respect of manufacturing quality, the quality assurance head office of the Company conducted 22 audits on 17 major manufacturing subsidiaries of the Company, thus achieving the full coverage of quality audit on our manufacturing subsidiaries. As of the end of the year, a total of 30 production lines of the five preparations enterprises of the Company and 25 products from 13 production lines of bulk medicines enterprises passed the GMP certification.

In respect of sales quality, the Company ensured the quality of incoming pharmaceuticals by stepping up efforts in inspection and acceptance, strengthened quality management of drug storage and transportation, enhanced monitoring and reporting of adverse drug reaction and followed up the sampling work in the drug market. We also improved quality audit works of pharmaceutical carriers and third-party logistics enterprises, and organized internal GSP audit as well as quality audit on the operating enterprises within the Company.

In respect of research and development quality, the quality assurance head office of the Company conducted the quality audit on three subordinated research institutes to ensure that the research projects of the Company were conducted in a compliant and efficient manner.

8 ENHANCING QUALITY AND UPHOLDING SAFETY

Case Sharing: Craftsmanship is the essence of quality-Livzon "Quality Day" on 23 March

On 23-24 March 2017, Livzon convened the 2017 Annual Quality Meeting at Chengdu and designated 23 March every year as "Livzon Quality Day". The meeting conveyed Livzon's general approach of "pursuing excellent through craftsmanship and attaining customer satisfaction as the goal of quality assurance". We also proposed higher quality requirements for "system upgrade and operational excellence". The meeting emphasized on craftsmanship in the pharmaceutical industry, as well as the core concepts of pursuing excellence and customer satisfaction, which forged the essence of Livzon's quality requirements and brands. The establishment of the "Quality Day" reflected our commitment to enhancing drug quality.



Meeting on "Quality Day"

8.1.3 Provision of quality services

Product complaints

Livzon places great importance to product quality and the handling of product complaints. The Company has established the Quality Enquiries and Quality Complaints Management System and the User Complaint Management Procedure. Quality assurance officers are in charge of the recording, assessment, investigation and handling of product quality complaints. They also timely identify the causes and reply the complainants with investigation results and handling progress via telephone or mail, so that every complaint is addressed and detailed documentation is maintained.

The Company strengthened after-sale drug quality management, timely addressed customer complaints, provided updates on drug quality and improved monitoring and reporting of adverse drug reactions, so as to ensure drug quality and safety.

Product recall

The Company has a three-tier drug recall mechanism in place based on the severity of potential drug safety hazards. Prior to the recall, we establish a detailed recall plan and inform the sales companies and customers about the suspension of sales and delivery of drugs. At the same time, we quarantine the inventory and report to the drug administrative authorities as required. We also recall the drugs from distribution channels at all level, take stock, inspect and accept the products and return the drugs to the manufacturers pursuant to the product return procedure. In order to ensure the traceability of sold drugs, we establish and maintain complete sales and purchase record. We also actively cooperate with drug manufacturers or drug administrative authorities in the relevant investigation.

8 ENHANCING QUALITY AND UPHOLDING SAFETY

Customer privacy

Livzon strictly protects customer privacy and maintains full compliance with applicable provisions in the Constitution of the People's Republic of China, the General Principles of the Civil Law of the People's Republic of China and the Tort Liability Law of the People's Republic of China regarding protection of personal information. This is to protect customer privacy, defend trade secrets and safeguard clients' rights. In 2017, there were no complaints on infringement of customer privacy or loss of customers' information, no complaints from regulators and no complaints on customer privacy received from external individuals or institutions or confirmed by external institutions.

8.2 UPHOLDING SAFETY

Safety works are an integral part of our responsibilities to society, business and employees. Livzon strictly abides by requirements of national laws and regulations, including the Labor Law of the People's Republic of China, the Production Safety Law of the People's Republic of China, the Law on the Prevention and Treatment of Occupational Disease of the People's Republic of China and the Fire Prevention Law of the People's Republic of China.

In 2017, the Company also revised 7 management systems, which included the Overall Requirement of EHS Management System of Livzon Group. Centering on the operation of the EHS management system, we strengthened risk management, change management and safety culture. For the control of major sources of risk, fire safety and maintenance, environmental compliance and other major control areas, the chief engineer office organized a number of comprehensive onsite EHS audits, where it timely identified hidden risks, supervised the corporates to carry out rectification within the specified period and followed up on the progress, which controlled the EHS risk of the Group and ensured normal business operation.

All subsidiaries of the Company are required to establish their own EHS management system in accordance with the requirements of ISO14001 Environmental Management System, OHSAS18001 Occupational Health and Safety Management System and relevant laws and regulations. The Company has also formulated the Measures for EHS Accident Administration of Livzon Group and Regular EHS Meeting and Spot Check Management System of Livzon Group to keep the operation of each factory in line with the EHS management requirements of the Company and report EHS accidents and various data in a timely manner, so as to form a management framework with the chief engineer office for the ongoing improvement of safety management performance of the Company.

8 ENHANCING QUALITY AND UPHOLDING SAFETY

Case Sharing: EHS undertaking signing ceremony and fire drill at Livzon MAB, a controlling subsidiary of Livzon

In July 2017, Livzon MAB held the EHS undertaking signing ceremony and fire drill, which aimed to raise employees' safety awareness, enhance their ability to evacuate, escape and self-rescue in fire and other unforeseen incidents, facilitate orderly and rapid evacuation and safeguard life and property in case of fire, and improve the coordination and rapid response of the lead emergency team. Mr. Fu Daotian, the vice president of the Company and the general manager of Livzon MAB attended the ceremony and entered into the safety undertaking with the person-in-charge.

The drill simulated a fire caused by electrical short circuit at the storage room on the second floor of the Livzon MAB building, which ignited flammables placed in the workshop in breach of regulations and trapped one employee. After the fire was discovered, the fire control centre initiated the emergency response plan after receiving the report. Fire safety officers of each floor rushed to the designated spot and volunteer firefighters promptly mobilized to put out the fire. During the rapid and orderly evacuation, all employees strictly followed the rules to cover their mouths and noses with towels and masks, and assembled orderly at the designated spot in the square in front of the Livzon MAB building.



EHS undertaking signing ceremony



Fire drill

9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Earth is our home. Incorporating the concepts of “green production, environmental protection and energy saving” in every step of our management and production, we strive to minimize the impact of our activities on the natural environment and pursue green development.

9.1 GREEN MANAGEMENT

The Company strictly follows and complies with various laws and regulations on production safety and environmental protection, which include the Environmental Protection Law of the People’s Republic of China and the Production Safety Law of the People’s Republic of China. We follow the requirements of the environmental management system and the occupational health and safety management system while optimizing the systematic environmental and safety risk control measures on an ongoing basis. In order to meet the national environmental standards of wastewater discharge, exhaust gas emission, noise control and disposal of hazardous waste, the Company continues to increase environmental investment and secures commencement of safety and green projects. We also regularly disclose information on safety and environmental initiatives as required to boost public engagement.

In compliance with national and local environmental laws and requirements and taking into account of the features of the pharmaceutical industry, the Company formulated the Overall Requirements of EHS Management System of Livzon Group, which targeted major facilities and equipment, energy and resources consumption and pollutant emission, actual operation and other aspects. We guided each subsidiary to establish, implement and maintain a standard EHS management system under the plan-do-check-act (PDCA) operating model. To ensure factory operation was in compliance with the EHS management regulations, the Company required each subsidiary to strictly adopt the standards of ISO14001 Environmental Management System and OHSAS18001 Occupational Health and Safety Management System, make regular report on EHS accidents and provide a wide range of data, which helped the building of a complete management framework for the improvement of EHS management of the Company.

The Company’s manufacturing enterprises are equipped with sewage treatment facilities and exhaust gas treatment facilities, etc. In order to strengthen various environmental protection initiatives, the Company actively promoted clean production and adopted “recycling, reduction and harmless” treatment for hazardous waste, which improved the utilization rate of resources and reduced the concentration and total amount of pollutant emission. Through energy saving and emission reduction and we strive to realize the coordinated development of enterprise economic benefit, social benefit and environmental protection benefit.

The Company has filed the safety and environmental management systems formulated by our manufacturing enterprises to the local environmental protection authorities. We have also set up emergency leadership groups and working groups, learnt emergency management measures, and organized professional training and contingency planning exercises for staff on a regular basis. During the year, each subsidiary of the Company had no major environmental accidents and production safety accidents, received no complaints from relevant parties, and effectively executed the annual safety and environmental protection objectives and plans.

9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

9.2 GREEN OPERATION

Livzon maintains strict compliance with relevant environmental protection regulations and adheres to energy saving and emission reduction in the production process. We have set out specific requirements for each subsidiary in relation to various indicators, such as energy consumption, water consumption and sewage discharge. The performance on such energy saving and environmental protection indicators forms the primary basis of the annual EHS assessment of such subsidiaries.

In terms of emission reduction, the Company strives to minimize the environmental impact through producing pollutant as less as possible and proper disposal of wastes. In terms of energy and resources conservation, we strive to lower energy consumption in the production process, place great importance to the use of water resources, electricity, thermal energy and new energy, and encourage staff to adopt reasonable use of energy and resources in actual operation. At the same time, we increase investment in energy saving facilities and introduce green production technology and equipment. We gradually phase out energy-intensive facilities, formulate strict energy and resources consumption procedures and maximize the value of energy and resources consumption.

9.2.1 Use of energy and resources

The Company actively introduces and promotes new energy saving technology, and phases out high energy consuming obsolete facilities to bring about the reform of energy and resources management. Through precise control and electronic monitoring of the production process, we get hold of energy consumption in the production process and gives active feedback. Meanwhile, we organize professional training and display energy saving slogans to encourage green practices of operators, thereby incorporating green concepts in every part of the production flow.

Case Sharing: Lower unit consumption of industrial steam of boilers through heat recovery equipment at Pharmaceutical Factory

The Pharmaceutical Factory installed new heat recovery equipment to scale down the use of steam as fuel. Currently, the Pharmaceutical Factory has a total of 5 vertical oil and gas-fired boilers, which lose part of the heat and lead to wastage through continuous discharge in the preparation of industrial steam. Approximately RMB50,000 was invested in the project for installation of new heat recovery equipment, which collects heat from the continuous discharge of the 5 boilers and uses it in heating raw water, so as to cut the use of industrial steam in the heating process and reduce steam consumption as fuel. In 2017, the Pharmaceutical Factory saved steam consumption for raw water heating by approximately 710 tonnes, which was equivalent to approximately 56,000 m³ of liquefied natural gas.



9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Case Sharing: Water and electricity saving renovation project for public utilities at Limin Factory

In 2017, Limin Factory, a subsidiary of the Company, launched the water and electricity saving renovation project for public utilities, which included:

1. Installation of a submersible pump at the sewage station and the tertiary sedimentation tank for the reuse of effluent to clean the press machines, which saved water consumption by 900 cubic meters per month;
2. Collection of concentrated water and water from the cooling station for reusing in the greening of flower-beds, workshops and office buildings, which saved water resources by approximately 2,250 cubic meters every year;
3. Cutting electricity consumption of air conditioning units in office buildings: independent operation of existing air conditioners in replacement of the air conditioning system and diversion of chilled water from the cooling station through cooling water pipes, which saved daily electricity consumption by approximately 900 kWh;

Through the above measures, the Company reduced power consumption and water consumption by 162,000 kWh and 13,050 cubic meters respectively, which was equivalent to economic benefits of RMB166,644.

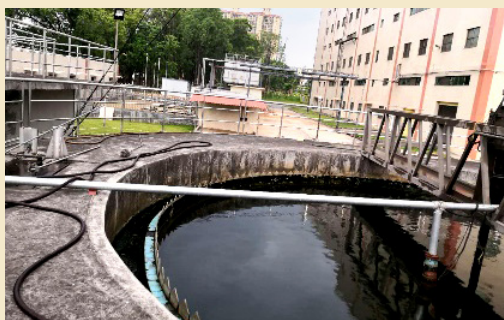


Table: Energy and resources consumption of Livzon in 2017¹

Indicator	Unit	Unit for 2017
Gasoline	liter	257,034.4
Diesel	liter	1,873,443.6
Coal	tonnes	142,748.0
Natural gas	0'000 cubic meters	748.3
Steam purchased	tonnes	173,912.4
Biomass fuel	tonnes	1,784.6
Electricity purchased	kWh	357,254,498.0
Electricity consumption per RMB0'000 of operating income	kWh/RMB0'000	418.8
Water consumption	tonnes	6,588,021.0
Water consumption per RMB0'000 of operating income	tonnes/RMB0'000	7.7
Paper packaging material used	tonnes	4,523.26
Paper packaging materials per RMB0'000 of operating income	kg/RMB0'000	5.3

¹ The disclosure scope of energy and resources consumption of Livzon for 2017 is the energy and resources consumption of industrial process of Livzon's manufacturing enterprises.

9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

9.2.2 Emission management

Livzon attaches great importance to the environmental impact of the production process. In terms of emission management, the Company strictly complies with, among other laws and regulations, the Environmental Protection Law of the People's Republic of China, the Law on the Prevention and Control of Environmental Pollution by Solid Waste of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, the Atmospheric Pollution Prevention and Control Law of the People's Republic of China, and the Regulations on the Prevention and Control of Environmental Pollution by Solid Waste of Guangdong Province. The Company has also formulated the Overall Requirements of EHS Management System of Livzon Group and the Identification and Assessment Requirements of Environmental Factors of Livzon Group within the organisation, minimized pollution to the environment caused by waste and improved the establishment of relevant systems on an ongoing basis, so as to reduce the environmental impact of its production and operation as much as possible.

Wastewater discharge

Case Sharing: Reducing COD emission through technical renovation at Livzon Hecheng

In 2017, Zhuhai FTZ Livzon Hecheng Pharmaceutical Manufacturing Co., Ltd. ("**Livzon Hecheng**"), a subsidiary of the Company, launched the upgrade and renovation of the aerobic aeration tank at the environmental protection centre. It also invested approximately RMB200,000 to introduce the fine-pore aeration equipment that replaced the original aeration tubes. The technical renovation has greatly enhanced the efficiency of the aerobic aeration tank. According to the test, with lower power consumption, the COD of the discharge from the aerobic aeration tank and the total COD emission reduced by approximately 10% and 4.32 tonnes respectively.



9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Exhaust gas emission

Case Sharing: Natural gas renovation project for a blue sky

In June 2017, Livzon Group Xinbeijiang Pharmaceutical Manufacturing Inc., a subsidiary of the Company, invested RMB820,000 in the natural gas renovation project, which is currently under normal operation. Following the switch to natural gas, the test report showed that the emission of sulphur dioxide, nitrogen oxides and particulates went down to 0.03 tonnes, 0.12 tonnes and 0.07 tonnes respectively in 2017. In addition to the great reduction in emissions of sulphur dioxide, nitrogen oxides and particulates, the renovation project also eliminated soot from burning and banking of biomass fuel, which significantly enhanced our corporate image as a green enterprise.



Disposal of solid waste

Livzon strictly abides by the clean production standard. During the production process, we conduct quality assessments on raw materials purchased for pharmaceutical manufacturing and take into account the potential drug contamination and environmental impact in the subsequent processes. We are committed to stopping the use of hazardous raw materials and reducing the use of risk raw materials. Moreover, the Company maintains stringent control over the use of chemicals in drug manufacture. We ensure the quality and safety of chemicals through supply chain management, and collect waste drugs and deliver them to hazardous waste treatment companies for proper disposal.

For the general solid waste produced by the Company, most of the packaging materials were recycled during the year, which reduced the impact on the environment. As to hazardous waste, all members of the Group were in compliance with legal requirements and engaged qualified service providers for compliant disposal in terms of application, approval, transfer and disposal.

9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Case Sharing: Introduction of bubbling precipitators at the Pharmaceutical Factory to reduce waste pollutants

In 2017, the Pharmaceutical Factory, a subsidiary of the Company, invested approximately RMB107,000 to introduce and promote the new precipitation technology and adopt the renovation of the precipitation system at the solid preparation workshop, which replaced the original dust collector and precipitator system with industrial bubbling precipitation system. Apart from that, the Pharmaceutical Factory also optimized the production process, rationalized the types of waste produced by the nonsterile manufacturing department, practised the sorting of hazardous solid waste, optimized transportation process, disposed of the drugs in scrap aluminum and plastic packs produced in aluminum and plastic processing, and lowered the weight of hazardous solid waste. In 2017, it produced approximately 5 tonnes of hazardous waste, representing a year-on-year decrease of 37%.



Case Sharing: Renovation of residue drying equipment at Gutian Fuxing

Gutian Fuxing Pharmaceutical Co., Ltd. ("Gutian Fuxing"), a subsidiary of the Company, produced 180 tonnes of mycelium residue annually. In 2017, Gutian Fuxing invested RMB1.3 million to upgrade and renovate the residue drying equipment. It introduced a new set of residue drying equipment that has performed well after several months of normal operation. The initiative saved 30 tonnes of coal per month and shortened drying time from 20 hours to 9 hours. After the drying process, the water content of residue dropped from 20% to below 15%, thereby improving the working environment of the drying process and reducing the emission of stench, with less impact on the nearby environment.



9 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Table: Livzon's pollutant emission in 2017²

Indicator	Unit	Data for 2017
Industrial wastewater	tonnes	4,612,173.0
Chemical Oxygen Demand (COD _{Cr})	tonnes	471.6
Ammonia nitrogen	tonnes	24.1
NO _x	tonnes	311.7
SO ₂	tonnes	96.3
Medical waste (HW02) and waste medicine (HW03)	tonnes	10,476.5
Other hazardous waste	tonnes	290.0
Total hazardous waste	tonnes	10,766.5
Hazardous waste per RMB0'000 of operating income	kg/RMB0'000	12.6
Total general industrial waste	tonnes	106,430.7
General industrial waste per RMB0'000 of operating income	kg/RMB0'000	124.8

Table: Livzon's greenhouse gas emission in 2017³

Indicator	Unit	Data for 2017
Total greenhouse gas emission	tonnes of CO ₂ equivalent	599,464.5
Greenhouse gas emission per RMB0'000 of operating income	tonnes of CO ₂ equivalent/RMB0'000	0.7

² The disclosure scope of Livzon's pollutant emission for 2017 is the total pollutant emission of industrial process of Livzon's manufacturing enterprises.

³ The disclosure scope of Livzon's greenhouse gas emission for 2017 is the total greenhouse gas emission of industrial process of Livzon's manufacturing enterprises.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Livzon regards employees as the most important asset and the cornerstone of sustainable corporate development. We strive to achieve work-life balance and establish harmonious working environment through an optimal remuneration and welfare system, diversified training and development opportunities, and a wide range of employee care activities, thereby paying attention and giving support to the comprehensive career development and work-life balance of the employees.

10.1 PEOPLE-ORIENTED TEAM

10.1.1 Human resources system

Livzon strictly abides by applicable laws and regulations such as the Labor Law of the People's Republic of China and the Labor Contract Law of the People's Republic of China. Since the establishment of the Company, we have adhered to the employment guidelines of "Learning virtues from others, maintaining harmony despite differences". We have fully respected the career development of staff, protected their legitimate rights and interests, and continuously improved their working environment. During the year, the Company maintained harmonious relationship with its employees.

Guided by national regulations such as the Labor Law of the People's Republic of China and Provisions on the Prohibition of Using Child Labor, Livzon adheres to legal employment. In order to ensure no child is employed, applicants are required to produce their identification documents for verification. During the year, all employees of the Company were in compliance with the minimum employment age stipulated in laws. There was no child labor or forced labor.

Anti-discrimination

We treat all employees equally in terms of recruitment, remuneration and promotion, regardless the ethnicity, race, marital status, gender, region and religion. Employees are entitled to equal rights.

Diversity

Our employees are of different ethnicities and come from different regions. They have diverse educational background and there is no gender and age requirement.

To better strengthen the management on staff recruitment and employment system and to implement the principles of anti-discrimination and diversity, the Company formulated management regulations such as the "Employment Management System" and "Recruitment Management System of Livzon Pharmaceutical".

Basic standards of employment system

The basic standards of employment management system of the Company are as follow:

1. The Company informs the job applicants of the job duties, condition, location, occupational hazards, details of production safety, remuneration and other information at request during recruitment.
2. The Company does not employ job applicants with subsisting employment contract with other employers and those whose health condition, working attitude, professional technical level and working performance do not meet the employment requirements.
3. The Company enters into the employment contract with the employee within the first 30 days of employment pursuant to the Labor Law.
4. During the probationary period, employees are entitled to wages no less than 80% of the amount agreed in the employment contract and not lower than the local minimum wage.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

5. The Company treats all employees equally. Their employment, remuneration and promotion are not biased against ethnicity, race, nationality, gender, religion, age, sexual orientation, political alignment and marital status.
6. The Company does not engage in forced labour by means of violence, threat or illegal restriction of personal freedom, or endanger the personal safety of employees by instructing and ordering them to carry out dangerous operation in breach of regulations.
7. The Company offers employees monthly salary, year-end double pay and allowances. We also pay housing funds and social insurance for those who have signed employment contracts, and distribute welfare fund to employees, such as festive allowance on the festival and birthday allowance on their birthday. Festival holidays, annual leaves, sick leaves, personal leaves and marital leaves are all in compliance with the requirements of the PRC.
8. In respect of incentive measures, besides publishing recognition essay and awarding honor certificates, the Company distributes discretionary economic or welfare incentives to the employees and records in their profiles. In respect of the penalty measures, the Company gives warning, demerit and major demerit to and terminates employment contract with those violating organizational discipline and hampering operation management.
9. The Company provides evidence for release or termination of an employment contract at the time of such release or termination.

In 2017, the Company, its wholly-owned subsidiaries and controlling subsidiaries had a total of 6,963 current employees.

Table: Livzon's employment data for 2017

Category	Indicator	Unit	Data for 2017
By gender	Male employees	people	3,902
	Female employees	people	3,061
By age	30 and below	people	3,003
	31-49	people	3,521
	50 and above	people	439
By region	Mainland China	people	6,951
	Hong Kong, Macau, Taiwan	people	1
	Overseas	people	11
Total number of employees		people	6,963
Employee turnover rate ⁴		percentage	19.0

10.1.2 Human resources target for 2017

Adhering to the "people-oriented" philosophy, the Company positions its human resources strategies around strategic and operation targets. In the course of daily management, the Company upholds the principle of "clearly defined objectives, clear assessment and equal communication". We attach great importance to cultivating employees' comprehensive qualities and developing the talent pipeline, for the purpose of building a development platform of skills learning and communication for the employees.

⁴ Calculation of employee turnover rate: employees turnover/(total number of employees at the beginning of the period+new recruits)

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

In 2017, the Company further optimized the human resources management system. We formulated and implemented specific measures to nurture talents that are customized to our strategic and business needs. At the same time, we accelerated the establishment of our human resources database, so that we may utilize big data as the reference for human resources decision making in the future.

1. Following the completion of the second unlocking of the Restricted A Shares Incentive Scheme, the share option incentive scheme came out, which represented a new initiative to motivate employees and enhance their satisfaction. The scheme shares the fruits of the Company's success with staff and greatly encourages them to be enthusiastic and active, which strengthens corporate cohesiveness.
2. The Company established the training system centering on Livzon Business School. We also developed the selection and training mechanism for internal trainers and lecturers, thereby supporting ongoing corporate and individual development, and facilitating the nurture and promotion of management members.
3. The Company has created a job grade system and salary system, which formed a dynamic value allocation system based on technology and skills assessment. As a result, administrative staff and technical staff are able to pursue career development through the dual channels.
4. The Company launched the communication mechanism that comprised "monitoring, assisting and facilitating" functions and established a communication bridge between the human resources departments at the headquarter and those at subsidiaries, thereby communicating the overall human resources strategy in a top-down manner.
5. As the big health sector continues to optimize and expand, our scale of operation and platform is growing. Our internationalization strategy has led to the adjustment of the talent portfolio and gathered top-notch talents around the world. We also encouraged our staff to introduce high-caliber individuals, so as to maintain Livzon's talent pool.

10.2 PEOPLE-ORIENTED DEVELOPMENT

Staff development in the Company is reflected by enhancement of individual value. Livzon has designed different promotion and career paths for employees, taking into account their expertise, background and preferences, so that they feel belong and trust the Company. At the same time, the Company has developed a comprehensive talent nurture system that offers long-term support to employees' professional development.

10.2.1 Salary and promotion

To reflect incentive remuneration, employee remuneration comprises of two portions: fixed income and variable income. Variable income was affected by performance of the Company and individual performance, which has fully boosted the morale and initiative of staff so as to achieve the Company's goal of promoting sustainable development. The Company completed the second unlocking under the first grant and the reserved grant of the Restricted A Shares Incentive Scheme in 2017.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

During the year, the total wages, bonuses, allowances, compensation, welfare, housing funds and social insurance paid to the employees by the Group amounted to RMB657.14 million (31 December 2016: RMB575.45 million).

Livzon adheres to the principles of open competition and talent mobility in an orderly manner. Adopting the merit-based approach, we promote competent employees and replace underperforming ones in accordance with the rotation and elimination mechanism. Management resources are shared within the Group for orderly mobilising of management members and business development needs. In terms of the management system, the Company formulated the Measures of Management of the Administrative and Technical Personnel Ranking System, which established the dual development channels for administrative personnel and technical personnel. This has expanded employees' promotion platforms and allowed them to give full play to their strengths.

10.2.2 Development and training

By fully integrating internal and external resources, our training system motivates and encourages staff to learn, while boosting their belongingness. This has facilitated the full and comprehensive development of our human resources and equipped our talent pool with greater competitiveness.

In 2017, the Company enriched the operating models of Livzon Business School. We not only established a student library, but also rolled out diverse offline learning programs that catered to students' needs and grade levels. These programs included sharing session on government projects reporting, reading club on craftsmanship, sharing session on green knowledge, target management training, orientation program for fresh graduates, project management, internal lectures and TTT training, personal planning methods and oral English.

In addition, newly promoted management members were offered a 45-hour online training course and mid-to-high level management officers were required to prepare essays on their management roles and submit book reports as a part of their study.

With the second term of Livzon Business School coming to a conclusion, the inauguration of the third term took place. The Company has been setting up branches of Livzon Business School and five branches were established at the subsidiaries of the Company as of the end of the year.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Meanwhile, the Company improved the orientation training for new employees. Apart from increasing the training time, we also invited internal lecturers and industry experts to educate new staff on production, quality, personnel system, administrative system, safety and environmental protection and information system, so that they would have full understanding of our corporate culture as well as professional and technical knowledge.

Table: Data of Development and Training organized by Livzon in 2017

Category	Indicator	Unit	Data for 2017
Total training participants		people	4,525
By gender	Male employee	people	2,560
	Female employee	people	1,965
Total training hours		hours	194,605
By gender	Training hours of male employees	hours	106,625
	Training hours of female employees	hours	87,980
Average training hours per employee		hours	27.9
By gender	Average training hours per male employee	hours	27.3
	Average training hours per female employee	hours	28.7

Case Sharing: "Learn English from the Best" lecture series of Livzon Business School

While Livzon accelerates its internationalization, language expertise and knowledge emerges as important skills at the workplace. In this regard, the Company has launched the "Learn English from the Best" lecture series as a regular public course of Livzon Business School, which will provide long-term and effective learning platform for staff to master the language.

On 23 May 2017, the "Learn English from the Best" lecture series of Livzon Business School commenced. Li Xiaofeng, the head of training of the training management department of the human resources headquarters, explained differences between Chinese and English culture and the common mistakes arising therefrom to participants of the first lecture.



Li Xiaofeng, the head of training, giving lecture to students

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: MBA Program of Livzon Business School

In January 2017, the “First Workshop of 2016 1st MBA Enhancement Course of Livzon Business School” commenced. Through games and discussions, students learnt more about the course and reported the outcome of the discussion.

In April 2017, the 2016 1st MBA Enhancement Course organized a salon, where in-depth discussion on “how to regulate business development of various departments in the current context?”, “how to retain high-caliber employees?” and “how to communicate in order to enhance efficiency and quality?” took place. Dai Zhifang, the head of the teaching office, was invited to share ideas on ways to improve learning effectiveness and speed. On 27 April 2017, the Company held the “Craftsmanship” reading club that explored the spirit of craftsmanship and its application in the new era.



Members of Livzon Business School participating in the event

Case Sharing: Meeting with the senior management-orientation training for fresh graduates

On 20 July 2017, our newly-recruited fresh graduates met with the senior management at the Livzon Hall during the orientation session. Five members of the senior management of the Company, including president Tao Desheng, vice president Fu Daotian, Yang Daihong, Lu Wenqi and Zhou Peng, had candid exchange with fresh graduates. They also told interesting workplace stories, gave career tips and shared office advice, which enabled new employees to learn from their insights.



The training session

10.3 PEOPLE-ORIENTED LIFESTYLE

In order to strengthen employees’ cohesiveness and belongingness, Livzon organized a wide range of sports competitions and large-scale outdoor events during the year, which included hiking and garden parties. These activities helped staff relieved stress at work, enriched their lives at leisure, enhanced their bonding with colleagues and created a harmonious workplace.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

10.3.1 Caring for staff

The Company promotes the interests of employees through staff wellbeing initiatives. Dedicated to taking care of our people, we offer them a dynamic working environment and enrich their spiritual lives. Our trade union presents birthday and festive allowances every month. Moreover, female employees are entitled to statutory maternity leaves. The Company also provides assistance to disadvantaged and physically-challenged employees through charity fund-raising and earmarking labor union funds. We keep close tab and follow up on them as well.

Case Sharing: Sending love to female employees on International Women's Day

On the morning of 8 March 2017, five of our leaders waited outside the Company with flowers, welcoming female employees and sending regards to them on International Women's Day, dubbed the "Queen's Day" nationally. The smile of female workers has warmed the cold days.



Leaders gifting flowers to female staff

Case Sharing: Livzon showed care when typhoon hit

When typhoon "Hato" struck Zhuhai in August 2017, the Company timely suspended operation for two days to safeguard the lives and properties of our people. We also issued a proposal to all staff and guaranteed to restore order after resuming operation, which boosted employee morale. Following the typhoon, we immediately got hold of the colleagues in need. For the 8 employees who suffered the most from the disaster, we expressed our sympathy and offered them solatium, which warmed their hearts.



The Company offering solatium to staff who suffered the most from the disaster

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: Supporting employees with exceptional difficulties

In February 2017, an employee of Limin Factory of the Group was diagnosed with uremia. Despite finding a kidney match, he was not able to afford it. In view of the urgent surgery, with approval from Mr. Tao Desheng, the president of the Company, the trade union of Limin Factory lent RMB200,000 for securing the organ. Our staff also joined hands and raised tens of thousands of dollars for the costly operation and postoperative care, while the trade union of the Group also offered help and financial aids. At the end, the employee underwent successful operation and is recovering.

In November 2017, Mr. Tao Desheng, the president of the Company, requested the trade union of the Group to conduct a survey on employees with exceptional difficulties and offer them living allowance, so that they could have a happy new year. 24 employees received the financial aids in 2017, comprising mostly frontline manufacturing staff. Some of the beneficiaries have served us for more than 10 years and some were newly recruited trainees, and their financial hardship was due to sickness of family members or other reasons. Thus, they all expressed their gratitude when they were granted the subsidies.



10.3.2 Cultural and sport life

With the aims of building a lifestyle and development platform for employees, enhancing communication, coordination and project management, and creating sound corporate culture, the trade union and our employees held large-scale staff activities such as gala dinners and carnivals. The Company also encouraged the establishment of interests groups and promoted positive attitude within the organization through a low-profile approach.

Currently, Livzon has a number of interest groups including the beauty image design club, football club, photography club, badminton club and outing club. We also newly established the Livzon Voluntary Team, Livzon Literary Society, Leli Fund and other associations in the year. The cultural and sport life of our employees was enriched with diversified and colourful club activities.

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: Livzon Football Club

Livzon Football Club is one of the largest and most representative clubs of the Company. In 2017, the club played a number of friendly matches with other teams. In addition to boosting corporate cohesion and enriching employees' spiritual lives, it also strengthened its social impact through a variety of ways.

In 2017, Livzon Football Club organized the New Year Match, head-to-head race and 5-on-5 football game. It also held screenings of the World Cup and received the invitation to a friendly match with Zhuhai Suoka Football Club, which is Zhuhai's only 11-player football club registered with the Chinese Football Association. To help the team advance, the party activity center of Livzon opened the standard football pitch with a site area of 7,000 sq.m, which provided more space for events and development.



Friendly match between Livzon alumni team and the football club

Case Sharing: Happy Jog for New Year

Every late autumn, Livzon organizes the "Happy Jog" for the New Year.

In 2017, the Zhuhai headquarters hosted the "Happy Jog for New Year" campaign, which was a national celebration that coordinated 3,000 participants in Zhuhai, Shanghai, Pengzhou, Fuzhou, Ningxia, Qingyuan and Shaoguan to welcome the new year. The Company invited high-calibre frontline marketing and manufacturing staff across the country to join the Happy Jog and Garden Party at the headquarters, where they reunited and spent happy times together. The "Happy Jog" enhanced Livzon's team cohesion and laid a solid foundation for building an excellent team.



High-spirited staff of Livzon

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: Vibrant Guangda leads the future–2017 Sichuan Guangda Half Marathon

On 25 March 2017, over 400 employees of Sichuan Guangda Pharmaceutical Manufacturing Co., Ltd. ("Sichuan Guangda") attended the grand opening of "Vibrant Guangda Leads the Future" Half Marathon Challenge in Gexianshan. Joined by Liu Ran, the general manager, Wu Dengju, the deputy general manager, and Liao Yanguang, the deputy general manager of Sichuan Guangda, our staff had an exciting run in the picturesque Gexianshan and their energetic looks added beauty to the scene.



Employees of Sichuan Guangda running with excitement in Gexianshan

Case Sharing: 2nd WeBattle Relay Race

Livzon WeBattle Relay Race is an online contest organized via the Company's official WeChat account. Designed to encourage Livzon's employees to express their thoughts through the official account, it comprised graphic and text competition (combining graphics and text), stage show competition (with Xiumi and H5) and video competition (in the form of video). In 2017, Livzon held the 2nd WeBattle Relay Race to discover, nurture and showcase talents. The graphic and text competition, H5 competition and video competition attracted 37 entries, 10 entries and 7 entries respectively, which competed for the first prize, second prize, third prize, recommended prize and excellent participant prize. The final prize was selected through WeChat Voting. 94% of entries were contributed by new employees, and the campaign has greatly motivated our staff and enriched their spiritual lives.



Promotional poster of WeBattle Relay Race

10 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

10.3.3 Staff communication

In 2017, the Company adhered to the corporate spirits of “practicability, innovation, efficiency”, and advocated the management philosophies of “mutual growth of employees and business” and “all employees living a decent life”. Through a variety of channels and forms, including corporate magazine, forum, website and WeChat, we promoted corporate culture and value, expanded communication channels for staff and enhanced employees’ wellbeing.

In order to improve the communication mechanism for our staff, the Company organized the Workers’ Congress on a regular basis. The congress facilitated timely disclosure of the Company’s operation and system establishment to staff, allowed us to respond to and understand employees’ needs and served as a platform for resolution of corporate system. In 2017, the Company developed the support service meeting system and put the support service centre in charge of the bimonthly meetings, with the aims of gathering opinions on quality of support services from all departments, collecting service requirements and reasonable suggestions, solving employees’ problems and achieving workplace harmony. In 2017, the Company collected 74 opinions and suggestions and resolved 57 issues in 5 meetings.

11 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Apart from drug R&D and professional marketing, Livzon is also committed to public charity. Through drug donation, community services and other voluntary activities, we show love and care to the community. Our participation in various social and community events as well as poverty relief manifests our active undertaking of social responsibility and our determination to promoting the “human life and healthcare business”.

11.1 EXTENDING CARE TO THE COMMUNITY

Livzon strives to give back to society by making active investment and advancing the healthcare business. We have provided capital and moral support to the neighboring communities for mutual growth. In 2017, Livzon established the volunteer team and organized volunteer activities on a regular basis to facilitate large-scale corporate events and major crisis relief, which further enhanced our brand image.

Case Sharing: Helping typhoon-stricken areas and giving back to society

In August 2017, at the first weekend since the severe typhoon “Hato” hit Zhuhai, the Company, as a leading local enterprise in Zhuhai, organized the disaster relief donation ceremony with the Government of Jinwan District, and donated RMB5 million to the local community for typhoon relief.



Typhoon relief donation ceremony

Case Sharing: Promoting charity and health—Livzon visiting Jinwan Hongqi Social Welfare Center

On 16 June 2017, members of marketing party branch of our party committee visited Jinwan Hongqi Social Welfare Center in Zhuhai. The elderly residents were offered Shexiang Shuhuoling manufactured by Sichuan Guangda, a subsidiary of the Company, as gifts. Our staff chatted and spent time with their new senior friends and lightened their days.



Sending gifts and warmth to the elderly

11 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Case Sharing: Marketing party branch of Livzon engaging in charity

On the eve of the “World Autism Awareness Day”, Mr. Wang Wei, the assistant to our president, led a team comprising members of Livzon’s marketing party branch and other staff to launch a charity event at Zhuhai Sunshine Rehabilitation School on 26 March 2017. During the event, participants observed the one-on-one therapy session carried out by teachers, understood more about therapeutic learning and chatted with schoolteachers.

Party members and our staff gave one-by-one the therapeutic learning device to students as gifts. Then, students gave a performance to show their gratitude.



Members of party branch interacting with students

11.2 CHARITY AND PUBLIC WELFARE

With a mission of “cultivating nourished lives”, Livzon offers high-quality and effective drugs to patients, makes great contribution to society and fulfills the social responsibility as a local pharmaceutical enterprise.

Case Sharing: Cooling breezes in hot summer

On 3-4 July 2017, Sichuan Guangda, a subsidiary of the Company, visited 7 senior care homes with 84 drug products worth approximately RMB200,000. They presented Chinese medicine for the elderly to cure the heat and cool down the body in the scorching summer, and expressed love and care to the people in need.



Livzon employees sending a cool breeze to the elderly

11 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Case Sharing: "Serving Country People by Promoting Technology, Culture and Public Health"—Manufacture and donate quality drugs

In April 2017, the Company was invited to the drug donation campaign, namely "Serving Country People by Promoting Technology, Culture and Public Health", which was jointly originated by the Committee of Education, Science, Culture, Health and Sports of the National Committee of the Chinese People's Political Consultative Conference and the Chinese Hospital Association. Through the event, the Company donated drugs worth RMB1,000,000.00 to the Health and Family Planning Commission of Yudu County, which sent all drugs to patients for free. The Company has participated in the "Serving Country People by Promoting Technology, Culture and Public Health" campaign from 2015 to 2017, and donated million-worth drugs in three consecutive years.



Donation ceremony

Case Sharing: Show support and love in "Fight Infection with Livzon"

On 19 August 2017, Livzon's anti-infective segment led over 20 kind-hearted participants to visit the Xiabulang Primary School in Tongren County, Qinghai, where the Company presented donated materials to students. At the donation ceremony, participants made generous contributions and showed their care. Some participants even paired up with top students and decided to fund their university education. This is Livzon's fourth charity campaign for students in mountainous areas since our ongoing commitment to Guanerxiang Primary School in Hunyuan County, Shanxi.



Participants telling stories to children

When severe disaster strikes, Livzon always lends a hand through donation and student sponsorship. Dedicated to promoting the health of mankind, we will aim to make new contribution to society and people's wellbeing as usual, and charity will continue to be our priority.

Table: Data of Livzon's Community Investment in 2017

Indicator	Unit	Data for 2017
Money contributed	RMB0'000	1,105.00
Materials contributed	RMB0'000	153.49
Number of volunteers	people	291

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

LIST OF POLICIES AND INDICATORS

ESG Areas	Main laws and regulations we are subject to	Examples of the Company's policies
A1.Emission	<p>Environmental Protection Law of the People's Republic of China</p> <p>Law on the Prevention and Control of Environmental Pollution by Solid Waste of the People's Republic of China</p> <p>Water Pollution Prevention and Control Law of the People's Republic of China</p> <p>Atmospheric Pollution Prevention and Control Law of the People's Republic of China</p> <p>Regulations on the Prevention and Control of Environmental Pollution by Solid Waste of Guangdong Province</p> <p>Provisions on the Administration of Urban Construction Garbage</p> <p>National Catalogue of Hazardous Wastes</p>	<p>Identification and Assessment Requirements of Environmental Factors of Livzon Group</p> <p>Procedure for Solid Waste Management</p> <p>Procedure for Wastewater Management</p> <p>Procedure for Exhaust Gas Emission Management</p> <p>Procedure for Noise Emission Management</p> <p>Procedure for Hazardous Chemicals Management</p>
A2. Use of Resources	<p>Energy Conservation Law of the People's Republic of China</p>	<p>Procedure for Resources Management</p> <p>Procedure for Energy Management</p>
A3. The Environment and Natural Resources	<p>Environmental Protection Law of the People's Republic of China</p>	<p>Overall Requirement of EHS Management System of Livzon Group</p> <p>Environmental Hygiene Management System for Factory Area</p>
B1. Employment	<p>Labor Law of the People's Republic of China</p> <p>Labor Contract Law of the People's Republic of China</p> <p>Labour Right Protection Law of the People's Republic of China</p> <p>Social Security Law of the People's Republic of China</p> <p>Provisions on the Prohibition of Using Child Labor</p> <p>Tax Law of the People's Republic of China</p>	<p>Employment Management System of Livzon Group</p> <p>Recruitment Management System of Livzon Pharmaceutical Group</p>

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Areas	Main laws and regulations we are subject to	Examples of the Company's policies
B2. Health and Safety	Labor Law of the People's Republic of China	Overall Requirement of EHS Management System of Livzon Group
	Labor Contract Law of the People's Republic of China	Measures for EHS Accident Administration of Livzon Group
	Social Security Law of the People's Republic of China	Regular EHS Meeting and Spot Check Management System of Livzon Group
		Administrative Measures for EHS Information and Communication of Livzon Group
B3. Development and Training		Administrative Procedure for Internal EHS Audit of Livzon Group
	Labor Law of the People's Republic of China	Measures of Management of the Administrative and Technical Personnel Ranking System
	Labor Contract Law of the People's Republic of China	
	Social Security Law of the People's Republic of China	
B4. Labour Standards	Labor Law of the People's Republic of China	Employment Management System
	Labor Contract Law of the People's Republic of China	
	Social Security Law of the People's Republic of China	
B5. Supply Chain Management	Company Law of the People's Republic of China	Procedure for Standardized Supplier Management
	Contract Law of the People's Republic of China	Procedure for Supplier Audit Management
		Code of Practice for Onsite Supplier Quality Audit
		List of Qualified Material Suppliers
		List of Longlisted Material Suppliers
		Material Management System
		Management Measures of Material Procurement
		Management Measures of Centralized Procurement of Bulk and General Materials
		Implementation Rules for Tender of Construction Projects

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Areas	Main laws and regulations we are subject to	Examples of the Company's policies
B6. Product Responsibility	Patent Law of the People's Republic of China	Procedure for Establishment of Self-developed Projects
	Trademark Law of the People's Republic of China	Quality Management System
	Copyright Law of the People's Republic of China	Standard Operating Procedure
	Drug Administration Law of the People's Republic of China	Procedure for Drug Inspection and Acceptance
	Good Manufacturing Practices for Pharmaceutical Products (GMP)	Quality Enquiries and Quality Complaints Management System
	Good Supply Practice for Pharmaceutical Products (GSP)	User Complaint Management Procedure
	Pharmacopoeia of the People's Republic of China	
	Administrative Measures for Drug Registration	
	Measures for the Supervision and Administration of Pharmaceutical Production	
B7. Anti-corruption	Administrative Measures for Drug Recalls	
	Regulations on Protection of Traditional Chinese Medicines	
	Criminal Law of the People's Republic of China	Employment Management System
	Anti-Unfair Competition Law of the People's Republic of China	Anti-corruption and Anti-commercial Bribery Regulations
	Interim Provisions on Banning Commercial Bribery	Code of Conduct for Sales Personnel
		Undertaking on Anti-corruption and Anti-commercial Bribery

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Indicator		Unit	Data for 2017
A. Environmental			
A1. Emissions			
A1.1	Types of emissions and emissions data		
	Industrial wastewater	tonnes	4,612,173.0
	Chemical Oxygen Demand (COD _{Cr})	tonnes	471.6
	Ammonia nitrogen	tonnes	24.1
	NO _x	tonnes	311.7
	SO ₂	tonnes	96.3
A1.2	Greenhouse gas emissions and intensity		
	Total greenhouse gas emissions	tonnes of CO ₂ equivalent	599,464.5
	Greenhouse gas emissions per RMB0'000 of operating income	tonnes of CO ₂ equivalent/ RMB0'000	0.7
A1.3	Hazardous waste produced		
	Medical waste (HW02) and waste medicine (HW03)	tonnes	10,476.5
	Other hazardous waste	tonnes	290.0
	Total hazardous waste	tonnes	10,766.5
	Hazardous waste per RMB0'000 of operating income	kg/RMB0'000	12.6
A1.4	Non-hazardous waste produced		
	Total general industrial waste	tonnes	106,430.7
	General industrial waste per RMB0'000 of operating income	kg/RMB0'000	124.8
A2. Use of Resources			
A2.1	Total energy consumption and intensity		
	Gasoline	litres	257,034.4
	Diesel	litres	1,873,443.6
	Coal	tonnes	142,748.0
	Natural gas	0'000 cubic meters	748.3
	Steam purchased	tonnes	173,912.4
	Biomass fuel	tonnes	1,784.6
	Electricity purchased	kWh	357,254,498.0
	Electricity consumption per RMB0'000 of operating income	kWh/RMB0'000	418.8

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Indicator		Unit	Data for 2017
A2.2	Water consumption and intensity		
	Total water consumption	tonnes	6,588,021.0
	Water consumption per RMB0'000 of operating income	tonnes/RMB0'000	7.7
A2.5	Packaging material used		
	Paper packaging materials	tonnes	4,523.26
	Paper packaging materials per RMB0'000 of operating income	kg/RMB0'000	5.3
B. Social			
B1. Employment			
B1.1	Total workforce by gender, employment type, age group and geographical region		
	Total number of employees	people	6,963
Gender	Male	people	3,902
	Female	people	3,061
Age	30 and below	people	3,003
	31-49	people	3,521
	50 and above	people	439
Geographical region	Mainland China	people	6,951
	Hong Kong, Macau and Taiwan	people	1
	Overseas	people	11
B1.2	Employee turnover rate by gender, employment type, age group and geographical region		
	Overall employee turnover ⁵	Percentage	19
B3. Development and Training			
B3.1	Employees trained		
	Total number of employees trained	people	4,525
	Number of male employees trained	people	2,560
	Number of female employees trained	people	1,965

⁵ Calculation of employee turnover rate: employees turnover/ (total number of employees at the beginning of the period+new recruits)

12 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Indicator		Unit	Data for 2017
B3.2	Training hours of employees		
	Total training hours of all employees	hours	194,605
	Total training hours of male employees	hours	106,625
	Total training hours of female employees	hours	87,980
	Average training hours per employee		
	Average training hours per employee	hours	27.9
	Average training hours per male employee	hours	27.3
	Average training hours per female employee	hours	28.7
B5. Supplier Management			
B5.1	Number of suppliers		
Region	Southern China	percentage	29
	Eastern China	percentage	40
	Northern China	percentage	9
	Central China	percentage	7
	Northeastern China	percentage	2
	Northwestern China	percentage	10
	Southwestern China	percentage	3
	Overseas	percentage	1
B7. Anti-corruption			
B7.1	Number of proposed or concluded corruption case	cases	0
B8. Community Investment			
B8.2	Resources devoted to focus areas		
	Money contributed	RMB0'000	1,105.00
	Materials contributed	RMB0'000	153.49
	Number of volunteers	people	291

13 “ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE” CONTENT INDEX

Environmental, Social and Governance Areas and General Disclosures and Key Performance Indicators (KPIs)			Corresponding section
Environmental A1: Emissions	General Disclosure		9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.1	The types of emissions and respective emissions data.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.2	Greenhouse gas emissions in total and intensity.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.3	Total hazardous waste produced and intensity.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.4	Total non-hazardous waste produced and intensity.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.5	Description of measures to mitigate emissions and results achieved.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
A2: Use of Resources	General Disclosure		9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A2.1	Energy consumption in total and intensity.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A2.2	Water consumption in total and intensity.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A2.3	Description of energy use efficiency initiatives and results achieved.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A2.5	Total packaging material used for finished products with reference to per unit produced.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
A3: The Environment and Natural Resources	General Disclosure		9. Green Pharmaceutical Industry And Commitment To Environmental Protection
	KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	9. Green Pharmaceutical Industry And Commitment To Environmental Protection
B1: Employment	General Disclosure		10. People-Oriented Mutual Development
	KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	10. People-Oriented Mutual Development
	KPI B1.2	Employee turnover rate by gender, age group and geographical region.	10. People-Oriented Mutual Development
B2: Health and Safety	General Disclosure		8. Enhancing Quality And Upholding Safety
	KPI B2.1	Number and rate of work-related fatalities.	Not disclosed
	KPI B2.2	Lost days due to work injury.	Not disclosed
	KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	8. Enhancing Quality And Upholding Safety

13 “ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE” CONTENT INDEX

Environmental, Social and Governance Areas and General Disclosures and Key Performance Indicators (KPIs)			Corresponding section	
B3: Development and Training	General Disclosure		10. People-Oriented Development	Mutual
	KPI B3.1	The percentage of employees trained by gender and employee category.	10. People-Oriented Development	Mutual
	KPI B3.2	The average training hours completed per employee by gender and employee category.	10. People-Oriented Development	Mutual
B4: Labour Standards	General Disclosure		10. People-Oriented Development	Mutual
	KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	10. People-Oriented Development	Mutual
	KPI B4.2	Description of steps taken to eliminate such practices when discovered.	10. People-Oriented Development	Mutual
B5: Supply Chain Management	General Disclosure		7. Innovative Development And Win-win Outcomes	
	KPI B5.1	Number of suppliers by geographical region.	7. Innovative Development And Win-win Outcomes	
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	7. Innovative Development And Win-win Outcomes	
B6: Product Responsibility	General Disclosure		8. Enhancing Quality And Upholding Safety	
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	The Company did not recall any products this year due to safety and health reasons	
	KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Details of complaint handling are set out in “8. Enhancing Quality And Upholding Safety”. Number of complaints received for this year is not disclosed	
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	7. Innovative Development And Win-win Outcomes	
	KPI B6.4	Description of quality assurance process and recall procedures.	8. Enhancing Quality And Upholding Safety	
	KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	8. Enhancing Quality And Upholding Safety	
B7: Anti-corruption	General Disclosure		5. ESG Management	
	KPI 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.	5. ESG Management	
	KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	5. ESG Management	
B8: Community Investment	General Disclosure		11. Take Action For Love, Do Good For Community	
	KPI B8.1	Focus areas of contribution.	11. Take Action For Love, Do Good For Community	
	KPI B8.2	Resources contributed to the focus area.	11. Take Action For Love, Do Good For Community	



Livzon, Cultivate Nourished Lives

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