

2017

CRRC Corporation Limited (CRRC)
Social Responsibility Report



Connect the World through Better Mobility



Preparation instructions

As the third annual Social responsibility report released since the establishment of CRRC, this Report accurately reflects the Company's economic, social and environmental responsibilities aiming to achieve comprehensive, coordinated and sustainable development.

• Reporting period

From January 1, 2017 to December 31 2017, some of the contents may be beyond the above period.

• Reporting scope

The Report covers the corporate headquarters and its subordinate enterprises.

• Sources

All information data hereunder has been sourced from the Company's official documents, statistical reports and financial reports, as well as the social responsibility information organised, summarised and reviewed by the Company.

• Basis for the Report

The Report has been prepared under the *Guidelines for Central Enterprises to Fulfill Social Responsibilities and the Implementation Guidelines for the Twelfth Five-year Plan for Harmonious Development of Central Enterprises* issued by SASAC, the *Environmental, Social and Governance Reporting Guide* issued by the Hong Kong Stock Exchange, the *Environmental Information Disclosure of Listed Companies and the Guidelines for Compiling Corporate Social Responsibility Reports* issued by the Shanghai Stock Exchange, the *Preparation Guidelines for China Corporate Social Responsibility Reports (CASS-CSR4.0)* issued by the Chinese Academy of Social Sciences, the *Sustainability Reporting Guidelines* issued by Global Reporting Initiative (GRI), and the *Guidance on Social Responsibility (ISO 26000)* issued by the International Organization for Standardization.

• Name description

For the convenience of presentation and readability, the CRRC Corporation Limited is referred to as "China CRRC", "CRRC", "the Company" and "We" in the Report.

• Access to the Report

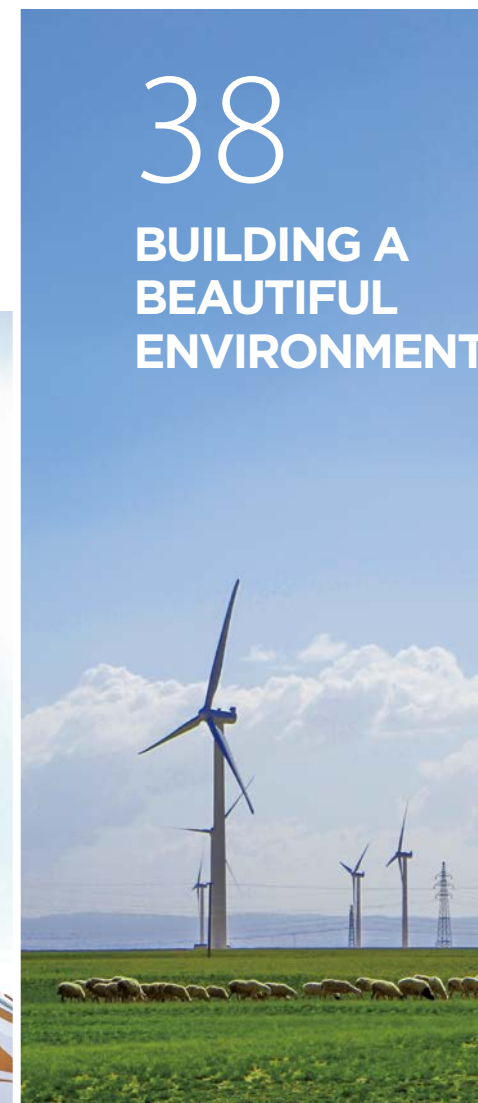
You may find the Report in PDF and dynamic information pertaining to corporate social responsibility activities on the "Social Responsibility" page of the CRRC Portal (Website: <http://www.crrcc.com>).

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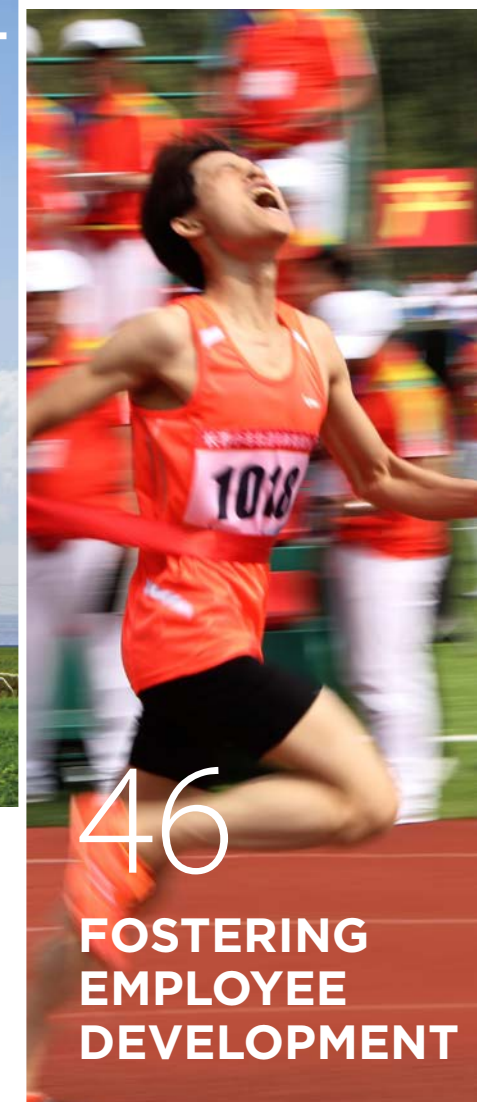
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Message from the Chairman



Liu Hualong, Chairman of the Board, CRRC Corporation Limited (CRRC)

CRRC pursues relentlessly the vision to be a well-respected and an internationalised company.

In the past year, we have focused on innovation-driven efforts to demonstrate “CRRC Wisdom”. CRRC enhances its global competitiveness through cultivating an innovative culture that embodies independence, openness and the ability to collaborate. CRRC accelerates the progress of 15 national-level smart manufacturing projects under the guidance of 11 national-level R&D institutions, 20 national-level enterprise technology centers and 13 overseas R&D centers. Researches, development, promotions and applications of a series of new products and technologies resulting from the collective minds of our seasoned professional team featuring academicians from the Chinese Academy of Engineering and “CRRC scientists” have enabled us to operate the 350 km/h “Fuxinghao” EMUs in batches and to launch the Smart Rail Trains and other new products. We seek to utilise technological transformations to foster the development of industry, and to promote social progress through innovative development.

In the past year, we have focused on green development to demonstrate “CRRC Solutions”. CRRC relies on its competitive edge in rail transit equipment and continuously strengthens and optimises the wind power industry, promote PV technologies, and push for a large-scale development of renewable energy, thus providing society with better energy options. We have actively participated in the construction of beautiful homes, in which the decentralised domestic sewage treatment solution for rural areas has become a model for the industry, and the solid waste treatment and other environmental protection properties have also been recognised by the market to continuously improve the ecological environment. In addition, we have vigorously promoted green manufacturing through the implementation of concepts such as energy conservation, low carbon and sustainable development in every detail of our product design and every manufacturing process. We seek to effectively respond to global climate change through the construction of a green CRRC, and to make positive contributions to the sustainable development of mankind.

In the past year, we have focused on “connectivity to demonstrate the “CRRC Image”. To accelerate its pace of “Going Out”, CRRC promotes the “Product + Technology + Capital + Management + Service” five-in-one model. Our products serve over 100 countries and regions in the world, and we also contribute to global economic and trade exchanges and connectivity through the creation of a smart logistics industry and shared packaging services. Every day, nearly 3,000 CRRC high-speed rail trains are driven on the vast land of China. High-speed rails have shortened distances and are profoundly changing people’s lives. CRRC has provided tens of thousands of urban rail equipment to cities and developed mobile internet platforms for smart transportation, facilitating more convenient, intelligent and interesting all-rounded service experiences. To continuously fulfill people’s expectations for a better life, we will continue with our mission to connect the world for the benefit of the people.

In the past year, we have focused on co-construction and sharing to demonstrate “CRRC Action”. CRRC has fully implemented the “Five-pronged Localization”, model of “Five Localisations” in terms of manufacturing, employment, procurement, maintenance and management”. We strive to be an “interpreter” of culture, an “incubator” for talents, “propeller” of the industry, and a “good neighbor” for the community. We actively respond to the call by the State by implementing support programs to metaphorically “transfuse and create blood” for the state and to facilitate targeted poverty alleviation. By adhering to co-building and sharing, joint development and win-win cooperation together with all stakeholders, CRRC undertakes greater national, social, corporate and shareholder responsibilities, and strives to be part of the solution to development issues and to gain the the world’s respect through more actions that are deemed respectable.

As a future outlook, we will strive to enhance the quality and benefits of corporate development so that all who work in CRRC will have a shared commitment to build a globally competitive world-class company.

About us

With the consent of the State Council and approval of the SASAC, China CNR Corporation Limited and CSR Corporation Limited merged into the CRRC under the equivalence principle, as an A+H share company. Approved by the China Securities Regulatory Commission, on June 8, 2015, CRRC successfully listed on the Shanghai Stock Exchange and the Hong Kong Stock Exchange.

As of the end of 2017, CRRC has established localised production bases in South Africa, Malaysia, Turkey, the United States, and other countries, and 13 overseas R&D centres in the United States, Germany, the United Kingdom, the Czech Republic, Switzerland, etc.

The main scope of business includes: research and development, design, manufacturing, refurbishment, sales, leasing and technical services of railway locomotives, rolling stocks, EMUs/DMUs, urban rail transit vehicles, engineering machinery, various electromechanical equipment, electronic equipment and components, as well as electronic devices and environmental protection equipment; information consultation; industry investment and management; asset management; import and export business.

Main business of the Company



Railway equipment business

- Locomotive business
- EMU/DMU and passenger carriage business
- Freight wagon business
- Track engineering machinery business



Urban rail transit and urban infrastructure business

- Urban rail transit vehicles
- EPC on urban rail transit vehicles projects
- EPC on other projects



New industry business

- General Electro-mechanical business
- Emerging industry business



Modern service business

- Financial business
- Logistics and trading business
- Other business

Major subsidiaries

Name	Registered Place	Business scope/nature
CRRC Changchun Railway Vehicles Co., Ltd. (hereinafter referred to as "CRRC Changchun")	Changchun	Manufacturing industry
CRRC Zhuzhou Institute Co., Ltd. (hereinafter referred to as "CRRC ZIC")	Zhuzhou	Manufacturing industry
CRRC Zhuzhou Locomotive Co., Ltd. (hereinafter referred to as "CRRC ZELC")	Zhuzhou	Manufacturing industry
CRRC Qingdao Sifang Co., Ltd. (hereinafter referred to as "CRRC Sifang")	Qingdao	Manufacturing industry
CRRC Tangshan Co., Ltd. (hereinafter referred to as "CRRC Tangshan")	Tangshan	Manufacturing industry
CRRC Dalian Co., Ltd. (hereinafter referred to as "CRRC DLOCO")	Dalian	Manufacturing industry
CRRC Qiqihaer Co., Ltd. (hereinafter referred to as "CRRC Qiqihaer")	Qiqihaer	Manufacturing industry
CRRC Yangtze Co., Ltd. (hereinafter referred to as "CRRC Yangtze")	Wuhan	Manufacturing industry
CRRC Investment and Leasing Co., Ltd. (hereinafter referred to as "CRRC Leasing")	Beijing	Trade
CRRC Qishuyan Co., Ltd. (hereinafter referred to as "CRRC Qishuyan")	Changzhou	Manufacturing industry
CRRC Qishuyan Institute Co., Ltd. (hereinafter referred to as "CRRC QSYRI")	Changzhou	Manufacturing industry
CRRC Capital Management Co., Ltd. (hereinafter referred to as "CRRC Capital")	Beijing	Financial industry
CRRC Nanjing Puzhen Co., Ltd. (hereinafter referred to as "CRRC Puzhen")	Nanjing	Manufacturing industry
CRRC Hongkong Capital Management Co., Ltd. (hereinafter referred to as "CRRC Hongkong Capital")	Hongkong	Manufacturing industry
CRRC CONSTRUCTION ENGRG.CO.,LTD. (hereinafter referred to as "CRRC ENGRG")	Beijing	Manufacturing industry
CRRC Beijing Erqi Locomotive Co., Ltd. (hereinafter referred to as "CRRC Erqi Locomotive")	Beijing	Manufacturing industry
CRRC Yongji Motor Co., Ltd. (hereinafter referred to as "CRRC Yonge")	Yongji	Manufacturing industry
CRRC Sifang Institute Co., Ltd. (hereinafter referred to as "CRRC Sifang Institute")	Qingdao	Manufacturing industry
CRRC Shandong Co., Ltd. (hereinafter referred to as "CRRC Shandong")	Ji'nan	Manufacturing industry
CRRC Finance Co., Ltd. (hereinafter referred to as "CRRC Finance")	Beijing	Financial industry
CRRC Zhuzhou Motor Co., Ltd. (hereinafter referred to as "CRRC Zhuzhou Motor")	Zhuzhou	Manufacturing industry
CRRC Shenyang Co., Ltd. (hereinafter referred to as "CRRC Shenyang")	Shenyang	Manufacturing industry
CRRC Xi'an Co., Ltd. (hereinafter referred to as "CRRC Xi'an")	Xi'an	Manufacturing industry
CRRC Ziyang Co., Ltd. (hereinafter referred to as "CRRC Ziyang")	Ziyang	Manufacturing industry
CRRC Beijing Nankou Co., Ltd. (hereinafter referred to as "CRRC Nankou")	Beijing	Manufacturing industry
CRRC Datong Co., Ltd. (hereinafter referred to as "CRRC Datong")	Datong	Manufacturing industry
CRRC Hongkong Co., Ltd. (hereinafter referred to as "CRRC Hongkong")	Hongkong	Trade
CRRC Chengdu Co., Ltd. (hereinafter referred to as "CRRC Chengdu")	Chengdu	Manufacturing industry
CRRC Guiyang Co., Ltd. (hereinafter referred to as "CRRC Guiyang")	Guiyang	Manufacturing industry
CRRC Shenzhen Capital Management Co., Ltd. (hereinafter referred to as "CRRC Shenzhen Capital")	Shenzhen	Manufacturing industry
CRRC Meishan Co., Ltd. (hereinafter referred to as "CRRC Meishan")	Meishan	Manufacturing industry
CRRC Dalian R&D Co., Ltd. (hereinafter referred to as "CRRC Dalian R&D")	Dalian	Manufacturing industry
CRRC Dalian Institute Co., Ltd. (hereinafter referred to as "CRRC DLRI")	Dalian	Manufacturing industry
CRRC Sifang Co., Ltd. (hereinafter referred to as "CRRC SFC")	Qingdao	Manufacturing industry
CRRC Taiyuan Co., Ltd. (hereinafter referred to as "CRRC Taiyuan")	Taiyuan	Manufacturing industry
CRRC Logistics Co., Ltd. (hereinafter referred to as "CRRC Logistics")	Beijing	Logistics
CRRC Shijiazhuang Co., Ltd. (hereinafter referred to as "CRRC Shijiazhuang")	Shijiazhuang	Manufacturing industry
CRRC Industrial Institute Co., Ltd. (hereinafter referred to as "CRRC Institute")	Beijing	Manufacturing industry
CRRC International Co., Ltd. (hereinafter referred to as "CRRC International")	Beijing	Trade
Beijing CNR China Railway Rail Transportation Equipment Co., Ltd.	Beijing	Manufacturing industry
CRRC Information Technology Co., Ltd. (hereinafter referred to as "CRRC InfoTech")	Beijing	Trade
CRRC Australia Co., Ltd. (hereinafter referred to as "CRRC Australia")	Australia	Trade
CRRC South Africa Co., Ltd. (hereinafter referred to as "CRRC South Africa")	South Africa	Manufacturing industry
Zhuzhou CRRC Times Electric Co., Ltd.	Zhuzhou	Manufacturing industry
Zhuzhou Times New Material Technology Co., Ltd.	Zhuzhou	Manufacturing industry

Note: Including subsidiaries indirectly held through subsidiaries

Social responsibility management

Actively fulfilling social responsibilities is an inevitable choice for enterprises to achieve sustainable development. We effectively link our fulfillment of social responsibilities with corporate development strategies, incorporate social responsibilities into all aspects of corporate production and operations, and strive to build CRRC as a respectable international company. In 2017, we further strengthened the disclosure and management of social responsibility information according to the requirements of regulatory agencies such as the SASAC, the China Securities Regulatory Commission, the Shanghai Stock Exchange and the Hong Kong Stock Exchange, and enhanced our quality and capacity for disclosure of environment, society and governance information. The 2016 Social Responsibility Report of the Company won the Outstanding Content Design Award as part of the 31st International ARC Awards.

Stakeholder communications

We attach great importance to the concerns and interests of various stakeholders by constantly improving participation mechanisms, strengthening communication and exchanges, enhancing operational transparency, and working together with stakeholders to seek common development and to create a better future.

Social responsibility concept

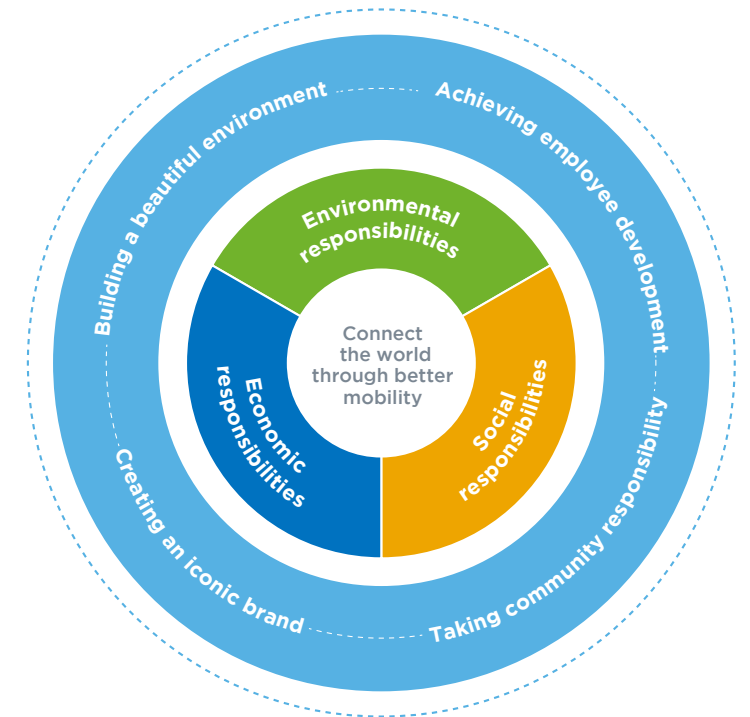
We will continue to strengthen our capacity for sustainable operations, adhere to the mission of "connect the world through better mobility", and contribute to the advancement of social development and progress.

Considering the environmental and social impacts, we are committed to providing the public with green and excellent products and services, and satisfying people's hope for a better life.

We will integrate all forces to create a CRRC community with a common future, so as to achieve win-win results, and share development achievements with all parties.

We will also actively shape a full range of high-end images to ensure that our iconic brand will never fade, and do our best to make CRRC a respected international company.

Management model of social responsibilities



Government and regulators

- Comply with laws and regulations
- Ensure the safety and reliability of products
- Carry out energy saving and emission reduction
- Maintain and appreciate state-owned assets
- Promote the technological progress
- Benefit the country and its people



Investors

- Remain good operational performance
- Ensure sound operation
- Enhance information disclosures



Clients

- Provide high-quality products and services
- Satisfy the diversified requirements of clients
- Create value for clients



The general public

- Offer safe and reliable products
- Promote operational transparency



Employees

- Protecting employees' rights and interests
- Ensuring occupational health
- Promoting occupational capacity
- Improving career paths
- Balancing work and life



Suppliers and partners

- Open, fair and equitable procurement
- Abiding by contracts/agreements
- Mutual benefit under win-win condition and long-term development



Peers and industry organisations

- Fair operation
- Win-win cooperation
- Boosting industrial development



Community

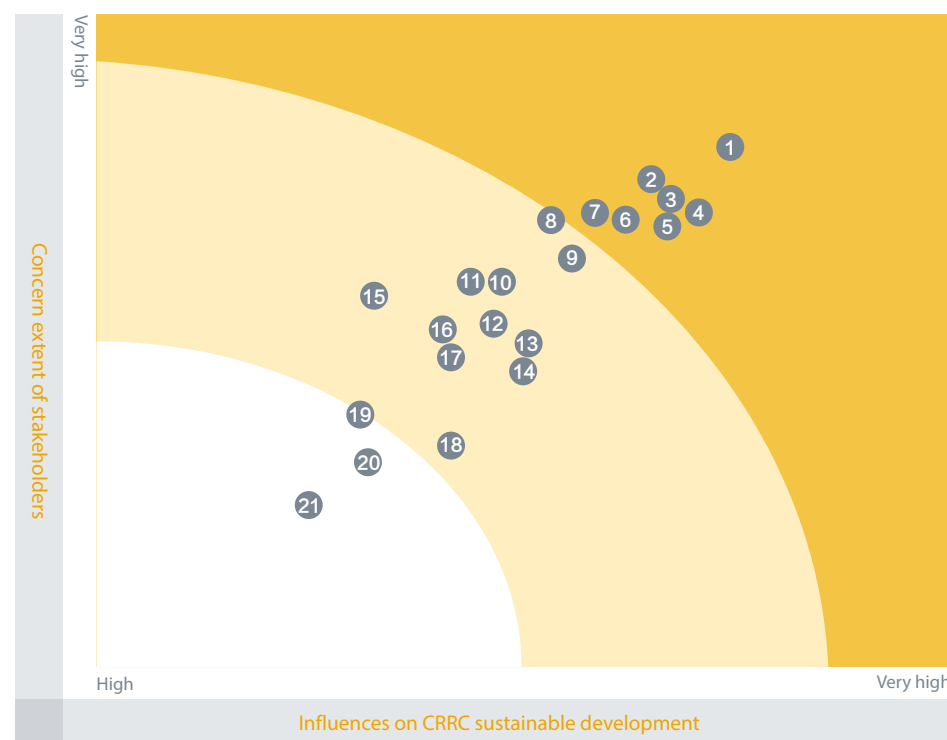
- Conducting targeted poverty alleviation
- Participating in community development
- Supporting philanthropy
- Protecting the environment

Materiality analysis

In accordance with the Environmental, Social and Governance Reporting Guide of the Hong Kong Stock Exchange, the Sustainability Reporting Guidelines issued by Global Reporting Initiative (GRI) and other guidance on social responsibility, we solicit the views of the internal and external stakeholders of the Company, and further refine the process of defining report contents based on the ESG information disclosures of international advanced enterprises, and identify and determine the importance of issues of interest to stakeholders, thus ultimately determining the degree and boundaries of disclosures, and ensuring more accurate and comprehensive disclosure of information on operation and management.



Materiality analysis results



1. Guaranteeing product quality
2. Credibility and compliance
3. Providing green products
4. Serving public transportation
5. Enhancing client service
6. Green concepts
7. Sci-tech innovation
8. Energy conservation and emission reduction
9. Boosting industry development
10. Employee development
11. Intellectual property management
12. Promoting regional economic development
13. Serving Cargo transportation
14. Employee care
15. Providing diversified products
16. Climate change adaptation
17. Business localisation
18. Supply chain management
19. Public communication
20. Development of poverty alleviation
21. Volunteer activity

Sustainable operation

CRRC promotes lean management, practises green development concepts, and strives to achieve more efficient and sustainable development with higher quality by adhering to the principle of compliance with laws and regulations, and taking the strategy of science and technology innovation as the guide based on value creation and satisfaction of customer needs, thus creating a respected international company. In 2017, we firmly grasped the direction of market-oriented reforms to deepen supply-side structural reforms, accelerate the pace of improving quality, efficiency, and transformation and upgrade of enterprises, further enhance vitality and motivation, and release of dividends, and promote the maintenance and appreciation of state-owned assets, so as to promote enterprises to become stronger, better and bigger.

Credibility and compliance

CRRC provides a strong guarantee for its continuous creation of value by continuously improving corporate governance, strengthening comprehensive risk management, establishing and improving internal control systems and working mechanisms, regulating corporate operations, actively accepting supervision from all parties, and constantly promoting the system construction for corruption punishment and prevention.

Improving governance mechanisms

CRRC, strictly abiding by laws and regulations such as company law and securities law, promotes the standardised operation of shareholders meetings, the board of directors, and the board of supervisors as a means of improving its corporate governance system, further enhancing the level of corporate governance, and ensuring its compliance with regulatory requirements.

CRRC has further optimised and streamlined the information disclosure process, and perpetuated the requirements for information disclosures in all aspects of its operations, and continuously improved the transparency of corporate information on the basis of ensuring compliance with laws and regulations on information disclosures. We have smooth channels of communication with investors, allowing investors to better understand our development ideas and operating conditions, so as to promote positive interaction between CRRC and investors. In 2017, we organised one reverse road show and one international road show. We also held several exchange meetings with investors and potential investors and analysts in Hongkong, Frankfurt, London, Paris, New York, etc.

Internal control and risk management

In 2017, CRRC has established a sound supervision system by strengthening its internal control system, continuously improving its risk prevention and control system, enhancing management practices and daily supervision and control, and specifying main responsibilities for risk prevention to help all systems playing a supervisory role based on the division of responsibilities.

Construction of punishment and prevention system

CRRC actively promotes the construction of CPC work style, clean governance and anti-corruption work, highlights the strict discipline of CPC, implements "Two Responsibilities" in depth, rigorously manages political life within the party, and signs the letters of responsibility for building CPC work style and clean governance with subsidiaries, and incorporates the accomplishments into annual performance assessments. The *Implementation Measures for CRRC Building A System and Mechanism that "Cannot Be Corrupt"* and the *Implementation Measures for Fault Tolerance and Correction Mechanism* have been established to rigorously investigate disciplinary violations and motivate those who start a pioneer work. We continuously strengthen the supervision and implementation of disciplines and responsibilities, and improve the four basic systems of reporting and handling of letters and visits, reviewing of discipline execution, case reviews, and case supervision and management. We have also committed to improving the incorruptible awareness of Party members and leaders by continuously carrying out discipline education activities such as the "100 discipline inspection leaders to teach discipline" lectures. CRRC, focusing on reducing purchase cost, accounts receivable and inventory carrying costs, loss reduction and control, controlling management levels within three levels and reducing legal entities by 20%, intensified its efforts to conduct performance supervision and special examinations. It also organised inspections. Four inspection teams were sent to implement "regular + special + project-based" inspections, for exploring "mobile" inspections, which effectively extends the all-out efforts to enforce strict Party discipline into the whole operation and management process.

- CRRC won "2017 Most Influential Listed Company Leader" and "The Listed Company with the Best Brand Value" at the China Securities Golden Bauhinia Awards
- CRRC won the honors: the Top 100 Enterprises in China, Star Enterprise in China and Top 100 Outstanding Entrepreneurs in China awarded by the 17th Top 100 Listed Companies in China Summit Forum.
- CRRC won the Hong Kong Corporate Governance Excellence Award in 2017
- In the evaluation of the 31st ARC Awards Competition, the Company won a Silver Award for Annual Report Cover Pictures/Design in Manufacturing Industry and a Bronze Award for Financial Data in Manufacturing Industry in 2016
- CRRC was rated A in the evaluation of annual listed company information disclosures by the Shanghai Stock Exchange

Science & innovation

Technological innovation is a focal point of the greatest importance to improve supply quality and level. CRRC, firmly seizing strategic opportunities, such as “the Belt and Road”, strives to become an active participant, a powerful driver and an innovative pioneer of “Made in China 2025” and “Internet Plus”, to facilitate the development of relevant industries, and upgrade China from a manufacturer of quantity to one of quality. CRRC was ranked No. 1 in the manufacturing industry of the “2017 World’s Most Innovative Companies” rated by Fortune China.

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Meanwhile, CRRC actively carries out international technological cooperation, and spares no effort to build a scientific and technological innovation system featuring “openness, collaboration, integration and worldwide footprint” by achieving win-win cooperation and taking advantage of complementary strengths. CRRC had established 11 state-level R&D institutions and 13 overseas R&D centers by the end of 2017.

Technology research and development

Devoted to building a collaborative and open technological innovative system, and aimed at “leading in the development of the global rail transit equipment industry”, CRRC remains committed to independent, open and collaborative innovation, and continues to enhance its innovation and development capabilities. The year 2017 witnessed great progress in three major technological innovative projects - institution innovation project, R&D innovation project and competence innovation project.

Institution innovation project

- CRRC started 6 advanced rail transit special programs under key national R&D programs.
- CRRC obtained approval for 1 ministerial-level key laboratory, 1 state-level industrial design center, and 2 newly built overseas R&D centers (Joint R&D Center for “Rail Transit Equipment Failure Prediction and Sound Management Technology Research & Application”, China-Russia R&D Center for High-speed Railway Technology).

Competence innovation project

- Major breakthroughs were made in 9 key special programs, including key technology research and demonstration application of purification tank for distributed town-village sewage treatment, key technology research and application of new high-efficiency micro-circulatory heat exchanger system and technology platform research into electric transmission systems for urban rail vehicles.
- The research and application project of new-generation of electric locomotive with AC transmission for express passenger transportation, led by CRRC and completed under participation of CRRC DLOCO and other units, was granted the “Second Prize of National Technology Progress Award”.
- The highly reliable HSR gear transmission system program undertaken by CRRC QSYRI won the “Second Prize of National Technology Progress Award”.
- During the 19th Chinese Patent Award evaluation in 2017, CRRC won 2 patent gold awards and 1 gold award for industrial design patents, both ranking No. 1 among China’s enterprises.

R&D innovation project

- The bulk operation of “Fuxinghao” 350km/h EMUs demonstrating that China has entered a new independent stage and standard in its development of bullet trains.
- Progress was made in technological research into high-speed maglev traveling up to 600 km/h and changeable gauge high-speed train traveling up to 400 km/h, and in development of such new products as Chinese standardised EMUs at a speed of 250 km/h and Chinese standardised EMUs of long composition at a speed of 350 km/h. New products including centralised power EMUs and Autonomous rail Rapid Transit (ART) train with a speed of 160 km/h rolled off the assembly lines.



Patent management

CRRC keeps improving its management of intellectual property rights (IPR), and effectively supports its innovative development by enhancing its capability to create, apply, manage and protect IPR results.

In 2017, CRRC applied for **4,324** patents

These included **2,746** invention patents

333 foreign patents were also applied for

Lean management

Based on the goal of creating a lean ecological system characterised by all-staff involvement, whole value chain and full product coverage, CRRC has established an integrated lean concept, philosophy, culture and brand with CRRC characteristics in a new era by relying on creation of value and satisfaction of customer experience.

Quality control

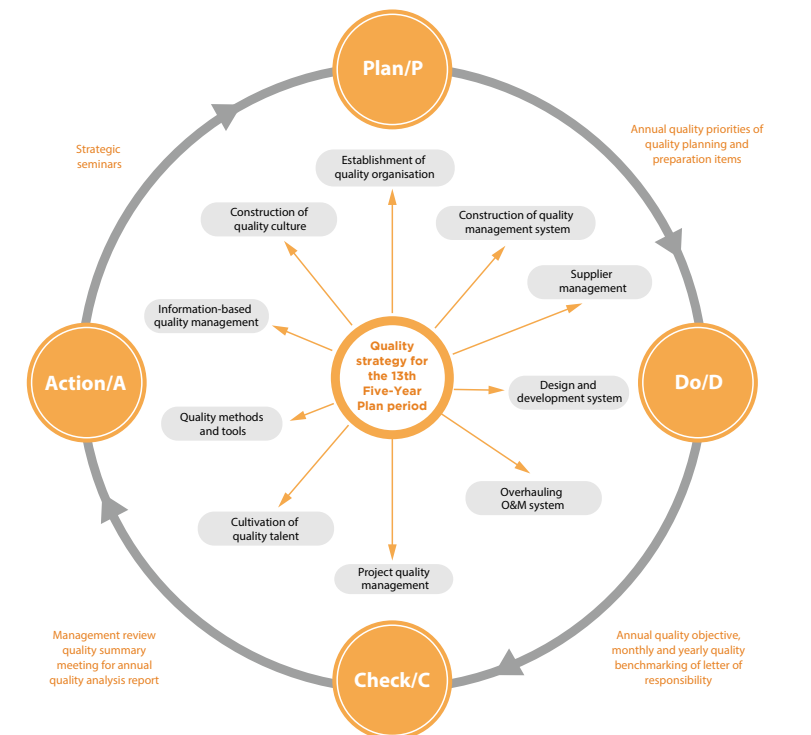
Following strictly the "CRRC Q" quality management standard system, we further control quality at source by tightening all-staff, comprehensive and whole-process quality control to ensure safe and stable operation of rail transit by taking high-speed rail and passenger safety as our fundamental principle, and delivering products and services of fine quality.

By the end of 2017, "Fuxinghao" EMUs had been running for 100 days at a speed of 350 km/h, totaling 3.7 million km under safe and stable operation.



Case: CRRC Changchun's self-improvement quality management

CRRC Changchun specified its quality strategy for the 13th Five-Year Plan period, based on its consistent adherence to the quality values of "all-staff involvement, independent innovation, continuous improvement and pursuit of excellence", and the quality policy of "safety and reliability, comfort and environment protection, continuous improvement, and pursuit of the better". It has established an independent self-improvement management model with the quality management system of International Railway Industry Standard (IRIS) as the core, by taking IRIS as the core, and integrating EN welding standards, American Capability Maturity Model Integration (CMMI), German adhesion health and other management systems, thus realizing PDCA cycle improvement of quality management. CRRC Changchun has brought home many honors in recent years, such as China Quality Award nominee, Industrial and Enterprise Quality Benchmark and Jilin Provincial Quality Award. It has been rated as one of the first "national innovative enterprises", "national high-tech enterprises", "national bases for invigorating trade through science and technology" and "national technological innovation demonstration enterprises".





Case: Boston subway, American standard, made in China

Boston's Orange Line (Subway) train developed by CRRC complies with American standards in terms of structural strength, control safety, quality management systems and other aspects. It is the first Chinese vehicle where all systems of the complete vehicle have been designed in accordance with American standards. It follows over 120 American standards, and also complies with the standards of American Association of People with Disabilities, the Environmental Protection Agency, Massachusetts Public Traffic Safety Act, U.S. military MIL human engineering standards, etc.

Supply chain management

CRRC is committed to building long-term stable cooperation with suppliers, to comprehensively promote supplier management, improve supplier management policy, supplier management procedures, and set up relevant systems. It establishes management mechanisms in selection, admission, evaluation and assessment of suppliers, thus encouraging suppliers to enhance product quality, honest performance capability and social responsibility management ability, and creating a sustainable supply chain.

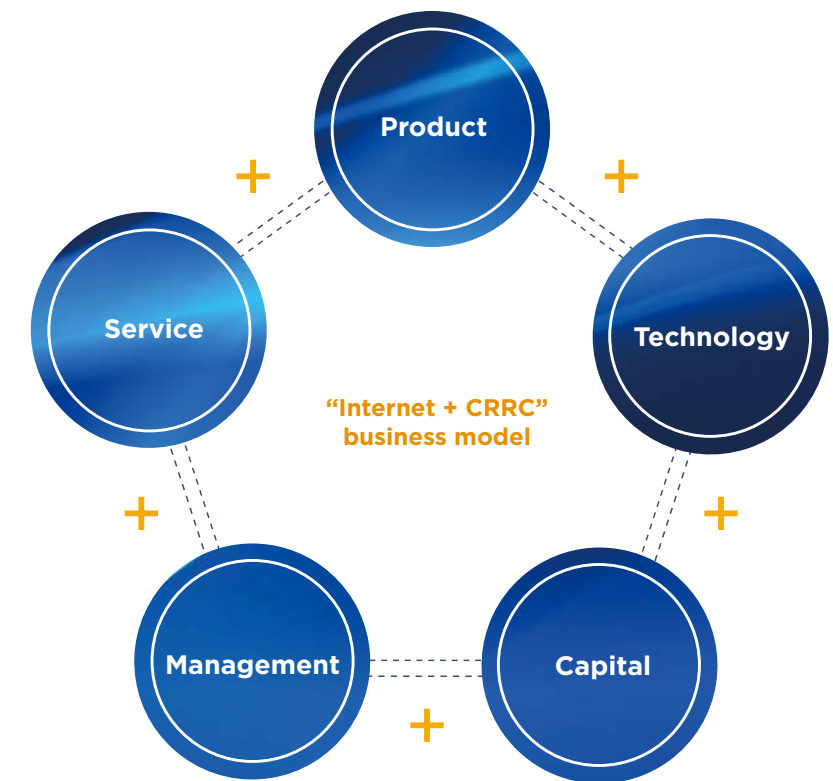


Case: "CRRC Shopping" becoming one of the first platforms of state-owned e-commerce enterprise alliance

CRRC supply chain e-commerce service platform – "CRRC Shopping" provides safe and convenient cloud application platform for users to meet business requirements of enterprise users to the utmost extent through Internet SaaS platform model. In August 2017, "CRRC Shopping" was admitted into the state-owned e-commerce enterprise alliance as one of the first e-commerce enterprises, making it a high-end outstanding enterprise in the rail transit industry and a leader in e-commerce platform of product supply chain.

Total life-cycle service

Based on customer experience and demand, CRRC keeps improving its capabilities in operation and maintenance, purchase and supply, value-added services and other aspects by exploring and using internet technology, to create a unified, integrated, collaborative and efficient total life-cycle service system. It has constructed the "Product Network", strives to implement remote monitoring, and keeps providing better total life-cycle services. It has constructed the "Product Network", explores the "Internet + CRRC" business model, and facilitates export of complete elements of "Product + Technology + Capital + Management + Service".



Case: "Clairvoyance" for overseas maintenance

In recent years, China's first "4S" store for overseas rail transit - Kuala Lumpur CRRC Maintenance Co., Ltd., an affiliate of CRRC ZELC, has worked hard to create a smart maintenance system. The smart maintenance system is able to integrate data collection, conduct big data analysis, assign maintenance tasks, keep track of maintenance processes, monitor of maintenance quality, analyse faults remotely and perform other processes during the maintenance of vehicles, covering the whole maintenance process. This will advance the transformation from the traditional single passive maintenance mode to entire network active preventive smart operation and maintenance, ensuring efficient and quality completion of maintenance, which helps to reduce the life-cycle costs of vehicles, and makes the vehicle system safer and more reliable.



Case: Serving the Mombasa-Nairobi railway

Kenya's Mombasa-Nairobi railway, well known as a model "the Belt and the Road" project, adopted Chinese standards and technology, was developed by Chinese enterprises, and is equipped with CRRC rolling stock.

On September 29, 2017, CRRC Qishuyan formally obtained the maintenance order for the standard gauge locomotives of Kenya's Mombasa-Nairobi railway. In addition, CRRC Qishuyan undertook training and cultivation of local employees, and worked with the operator of Mombasa-Nairobi railway to build a highly qualified staff team. So the Mombasa-Nairobi railway represents the global presence of Chinese standards, Chinese technologies, "Made in China", Chinese operating systems as well as maintenance showing that CRRC has transformed from "product manufacturing" to "sound management" on Mombasa-Nairobi railway.



Green manufacturing

CRRC has thoroughly followed the concept of green development, vigorously promoted green manufacturing by integrating the concept of energy-saving, low-carbon and sustainable development into each step of product design and every manufacturing process, with an aim of building a "green manufacturing" enterprise, and a "Green CRRC".

Environmental management system

CRRC earnestly enforces national and local energy-saving and environmental protection laws and regulations, and takes the initiative to be regarded by the leading advanced enterprises in the industry as a benchmark. It establishes and improves energy-saving and emission reduction management system centered on risk management, and based on environment-friendly energy online monitoring and information-based control system, under guidance of the energy-saving and emission-reduction target adaptive to information disclosures. In 2017, all production-oriented subsidiaries established and maintained environmental management system, with 17 primary and 3 secondary subsidiaries having passed the certification of energy management system.



4 subsidiaries passed the clean production audits



10 subsidiaries went through energy audits



3 subsidiaries went through water balance tests

Energy conservation and emission reduction

Committed to “green development, environment protection as a top priority”, and the philosophy that “lucid waters and lush mountains are invaluable assets”, CRRC saw no major violations or environment accidents throughout the year, and achieved the annual energy-saving and emission reduction goal by giving top priority to energy conservation and emission reduction, bringing the energy-saving and emission reduction target into reality, tightening environmental risk control, and emphasizing key special environment protection tasks.

In 2017, CRRC actively organised technological upgrading projects aimed at saving energy and reducing emissions with an investment of hundreds of millions of yuan, completed 87 energy-saving technological upgrading projects, based on its own technological characteristics. Energy structure was further upgraded, which played a major role in realising the energy-saving and emission reduction goals.

Item	Measuring unit	Total amount of 2017
Emissions of SO ₂	Tons	1,764
Emissions of chemical oxygen demand (COD)	Tons	1,017
Emissions of CO ₂	Tons	2,726,467
Emissions of CO ₂ of Rmb 10,000 output value	Tons/10,000 yuan	0.12
Total disposal of hazardous wastes	Tons	16,176
Total amount of general industrial solid wastes	Ton	358,773
Comprehensive energy consumption	Tons SCE	810,678
Fresh water consumption	Tons	20,962,594



Case: CRRC Qishuyan optimises energy utilisation structure

CRRC Qishuyan saves energy in processes, reduces energy consumption in pipes, and raises energy efficiency by optimising energy utilisation infrastructure. The energy efficiency of electric motors increased by 3%, piping loss declined by 35%, steam and compressed air consumption per unit of production decreased by 11.25% compared with the same period of the previous year, which amounts to reduction of energy consumption in steam and compressed air worth Rmb 980,000; through control of water consumption, 2.2 million tons of reclaimed water was reused, 120,000 tons of cooling water was recycled, saving Rmb 550,000 in water resources; through control of energy supply and consumption, 75 tons of diesel, 11 tons of gasoline and 52 tons of liquefied petroleum gas were saved, and consumption of standard coal equivalent (SCE) was reduced by 525 tons, saving Rmb 3.42 million.



Case: CRRC Datong recycled high heating value (HHV) waste water and heat

In 2017, CRRC Datong recycled HHV waste water and heat produced by industrial boilers, saving 648 tons SCE and reducing emissions by 1,422 tons of CO₂ in one year.



Case: CRRC Sifang Institute saw remarkable energy-saving and environment friendly effects through upgrading equipment

In 2017, CRRC Sifang Institute changed all oil immersed transformers into dry transformers at a cost Rmb 1.6 million, saving 130,720 kW-h annually, The dry transformers are also dust and explosion proof and require no maintenance.

Also, public shower rooms were transformed the bachelor quarters of the company by using solar water heaters, saving almost 100,000 kW-h in one year.



Case: CRRC ZELC promoted application of electrostatic spraying and water-based paint technologies

In 2017, CRRC ZELC carried out project-based pilot application of “water-based paint + electrostatic spraying + benzene-free environmental-protection putty”, which makes it the first CRRC subsidiary to use electrostatic spraying and water-based paint technologies. The pollution-free coating system of “water-based paint + electrostatic spraying + benzene-free environmental-protection putty” raises product health factor, and reduces paint cost by about 40%, with a significant decrease in content of volatile organic compounds, which better guarantees the employees’ occupational health while lowering the environmental impact.



By pursuing “innovation, reform and globalisation” in 2017, CRRC continued to promote information-based, digital and smart urban rail transit systems, and to introduce safer, faster, smarter, greener and more convenient traveling plans to meet higher travel expectations.



CREATING AN ICONIC BRAND



Connecting the world

CRRC carries the mission of “connecting the world through better mobility” and vigorously promotes the interconnectivity of the world.

Overseas business

In 2017, led by the philosophy to create a respectable international company, CRRC actively planned for global expansion, accelerated international business and preliminarily realised an export portfolio with export products ranging from mid-low end to mid-high end, export markets covering Asia, Africa & Latin America and Europe, America and Australia, with the export form changing from product export to combinations of “product + technology + capital + management + service”. By the end of 2017, CRRC products and services are being used in 104 countries and regions in the world.

In 2017 CRRC won business such as the Los Angeles Metro Project, the Boston Metro Trains Project, the Philadelphia Double-deck passenger coach Project, the Montreal Double-deck passenger coach Project, and contracts to supply wagons to Britain and Switzerland, achieving further market recognition. In addition CRRC signed an agreement on Indonesia Jakarta-Bandung High Speed Railway Train Project, the first “go out” order for a China high-speed railway. CRRC also undertook maintenance work projects on locomotives, in Pakistan, on the Saudi Arabia Mecca Hajj Metro, on the Israel Tel Aviv Light Rail and on the Mombasa-Nairobi Railway, with the “product + service” mode developing steadily. CRRC received ratings from Standard & Poor’s, Moody’s and Fitch Ratings the same as China’s rating for sovereign debt, the highest international rating of the manufacturing industry in China.

CRRC products are being used in

104 countries and regions

“The Belt and Road” initiative is important for China to build up a new development pattern, as well as a significant move to create a global community with a common economy and future. CRRC was deeply involved in “the Belt and Road” initiative in 2017. We adapted to traffic strategies of various countries and dedicated to solving global traffic problems with “CRRC technologies, products, solutions and wisdom”.



2017 International footprint of CRRC

North America - Canada

Won Montreal passenger car order

North America - the United States (Los Angeles)

Won US Los Angeles Metro order

Europe - Germany

Signed a strategic cooperation framework agreement with Voith

Europe - Serbia

The first European standard electric locomotive in China was sent to Serbia from CRRC ZELC

Europe- Russia

Established Sino-Russian High-speed Rail Technology Joint R&D Center

Europe - Britain

London Underground Limited introduced railway gondolas and railway flat-cars from China

Europe - Switzerland

Won Switzerland wagons project

North America - the United States (Boston)

Won Boston Metro Trains order

North America - the United States (Philadelphia)

Won Philadelphia Double-deck passenger coach order

North America - the United States (Chicago)

Factory construction commencement ceremony held in Chicago

South America - Brazil

Won Chinese enterprise's first order in Brazil Saopaulo urban rail vehicle project

Africa - South Africa

The first locomotive part finished during localised production

Africa - Kenya

Rail wagons delivered by CRRC for Kenya Mombasa- Nairobi Railway arrived in Mombasa Port

South Asia - Pakistan

"Sino-Pakistan" hopper car left the assembly line successfully

Southeast Asia - Malaysia

Signed a sales contract on hybrid power motor train unit with the Ministry of Transport of Malaysia

Oceania- Australia

Established Asia Pacific Headquarters and Rail Vehicle Engineering Research Center in Melbourne

Business in China

By the end of 2017, revenue kilometers of China's High-Speed Rail had exceeded

22,000 km

and CRRC had provided more than 2,000 high speed EMUs cumulatively in China.

EMUs manufactured by CRRC suit various complex environment in China such as extreme cold, sand, high temperatures and plateau conditions and meet diversified market demands in China.

In 2017, Chinese railway sent a total of

3.039 billion

passengers, with a year-on-year growth of 9.6%. Trains manufactured by CRRC provide better travel services for more and more people.

By the end of 2017, China has built the world's largest high-speed railway network. High-speed rail not only builds new life space, but also creates a new economic landscape. Baoji-Lanzhou High-speed Railway came into operation in 2017, indicating full realization of "four vertical and four horizontal" high speed railway network specified in *Medium and Long-term Railway Network Planning*.



Case: Alpine-wind-sand resistant CRH5G type technology updated EMU manufactured by CRRC made the first appearance

Baoji-Lanzhou High-speed Railway came into operation in July 9, 2017 and the attached trains were CRH5G type technology promotion EMUs. Such EMUs are designated for Lanzhou-Xinjiang Railway to better meet the conditions of extreme cold, high temperature, high humidity, strong plateau wind and strong ultraviolet radiation, and to meet the demand of the northwestern region for improving passenger transport efficiency and transportation quality.



Case: Xi'an-Chengdu High-Speed Railway came into operation officially, solving the problem of "Difficult Road to Sichuan" in the new era

The Xi'an-Chengdu High-Speed Railway with CRH3A type EMUs manufactured by CRRC came into operation officially on December 6, 2017. The Xi'an-Chengdu High-Speed Railway connects Xi'an, Shaanxi and Chengdu, Sichuan, with a total length of 658km and operating speed of 250km/h. Since then, the travelling time from Xi'an to Chengdu has been reduced from the previous 10 hours to more than 3 hours.

"Fuxinghao" EMUs manufactured by CRRC operated at 350km/h on September 21, 2017 becoming the highest speed commercially operating of high speed railway in the world. The formal operation of the "Fuxinghao" EMUs also means that China's high-speed rail has entered the world's advanced ranks in terms of speed grades, operating quantity, operational energy consumption, smoothness and comfort level.

THE carriage height of the "Fuxinghao" EMUs manufactured by CRRC was increased from 3.7m to 4.05m with the sectional area increased by 7.3%. The increased "body size" provides passengers with a more comfortable travel experience. In terms of CR400AF "Fuxinghao" EMUs, the R&D team selected the best from more than 40 prototypes of vehicle head, and carried out simulation calculations, wind tunnel tests, and dynamic model tests on aerodynamic performance to guarantee noise levels in the passenger cabin are better than the "excellent line" standard, and that comfort level and speed increase synchronously when the train operates at 350km/h.



Everyday life

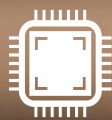
CRRC is committed to building intelligent rail transit ecosystems in the world. It builds a green three-dimensional transportation network with trunk railway trains, intercity trains, urban subways, light rail vehicles and electric buses, and effectively integrates the internet industry with traditional transportation service industries. With all-around aggregation of resources and construction of travel, shopping, work, entertainment and other one-stop intelligent service stewards, it provides the public with a new intelligent travel experience, and strives to improve users' "sense of gain" and value experience.

Smart transportation

As a creator of digit traffic, CRRC has a large product portfolio and can provide rail traffic customised system solutions based on customer needs.

Intelligent products of CRRC such as "Fuxinghao" EMUs, the first intelligent rail train in the world and automatic drive type trams were launched one after another in 2017. Kuala Lumpur Light Rail Line 3 Project became the first fully automatic driverless light rail vehicle project led by a Chinese enterprise overseas. These next-generation intelligent rail transportation installations reflect the innovation and practice of CRRC serving society and bringing users a full range of secure and positive transport experience.

Case: Fully intelligent "Fuxinghao" EMUs



Intelligent monitoring

More than 2,500 sensors in the train collect more than 1,500 data points monitoring train vibration, bearing temperature, the status of driving-braking system and carriage environments at all times. Train systems may give alarm or early warning automatically in case of abnormalities, and can also limit train speed or brake automatically according to the security strategy.



Intelligent decision-making

The AI-based real-time driver operating behavior analysis system can autonomously analyse the characteristics of driver's driving behavior according to video surveillance data, and can also trigger alarms if a driver is behaving erratically with recognition accuracy more than 99%.



Intelligent user experience

The "Fuxinghao" EMUs incorporates satellite communication technology, realising the integration of office, social contact, shopping and entertainment for users in the train and making passengers fully experience the convenience and fun of travel.



Case: the first virtual rail train in the world

CRRC ZIC successfully launched a new traffic product named "Autonomous rail Rapid Transit"- "ART" on June 2, 2017. This is a cross-border product that combines the advantages of modern trams and buses, designed for the solution of "urban diseases". It does not require separate rails and can share road rights with other vehicles. It also has a large carrying capacity and will bring new choices and experiences for city journeys. The "ART" system can detect congestion ahead intelligently and then switch roads. Just like rail trains such as light rail and metro, "ART" trains are pollution-free without any emissions. They support multiple power supply modes and will become a new choice for urban public transportation.



Case: Alignment joint-test of the first magnetic levitation train in Beijing

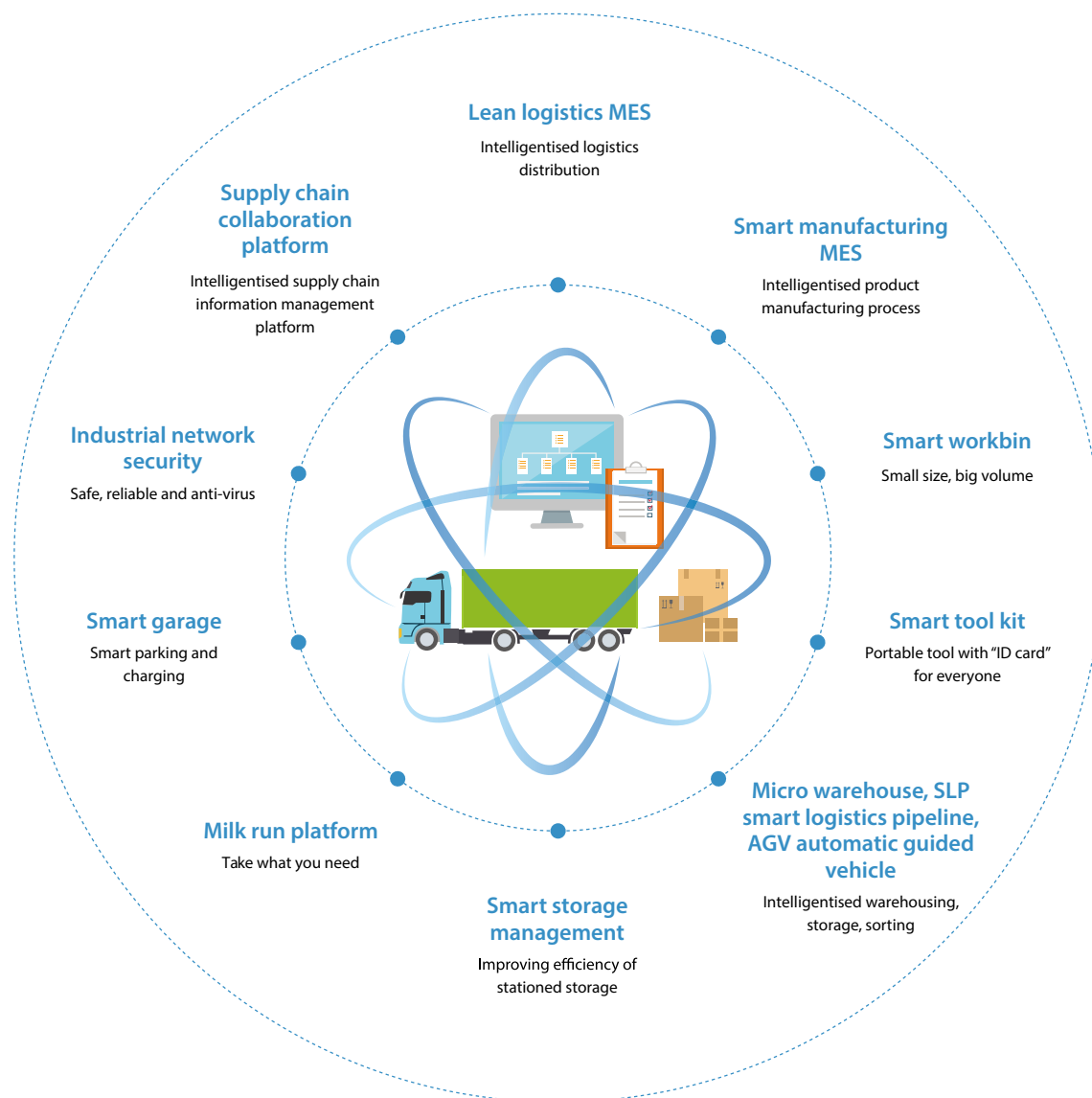
In June 2017, the integration test of the first medium- and low-speed maglev railway line in Beijing (S1 line) started. The S1 line is an electromagnetic environmentally-friendly urban rail transit system with a maximum speed of over 100 km/h. The vehicles are driven by a linear motor. With lower noise level, greater capability to climb slopes, and smaller curve radius, it is more suitable for narrow road conditions, especially in densely populated urban areas.

Smart logistics

CRRC is actively seeking the integration and development with modern logistics, the implementation of containerised transportation, multimodal transport, external integration and internal distribution, and the large-scale promotion of connection between dedicated lines and the plants and parks to solve "last kilometer" logistics challenges.

In 2017, CRRC constructed Lean Logistics MES, supply chain collaboration platform, milk run platform, virtual external warehouse system, shared packaging, etc. The "Intelligentised Logistics Management of Rail Equipment Manufacturing Enterprise Based on Lean Manufacturing" developed by CRRC was awarded the first prize of the 23th National Business Management Modernization Innovation Achievement, and the "Smart Logistics Platform SLP" was awarded the third prize of Science and Technology Progress by the China Federation of Logistics and Purchasing.

Ten "smart" modules of smart logistics



Intelligent travel

Transportation comes first for a convenient life. CRRC is committed to providing the public with brand new intelligent travel experiences, actively building shared transportation modes, supplying personalised smart transportation solutions, realizing end-to-end timely passenger and cargo transportation, and constructing a data-driven intelligentised new ecology for the rail transit industry to make travel more smooth, convenient and efficient.

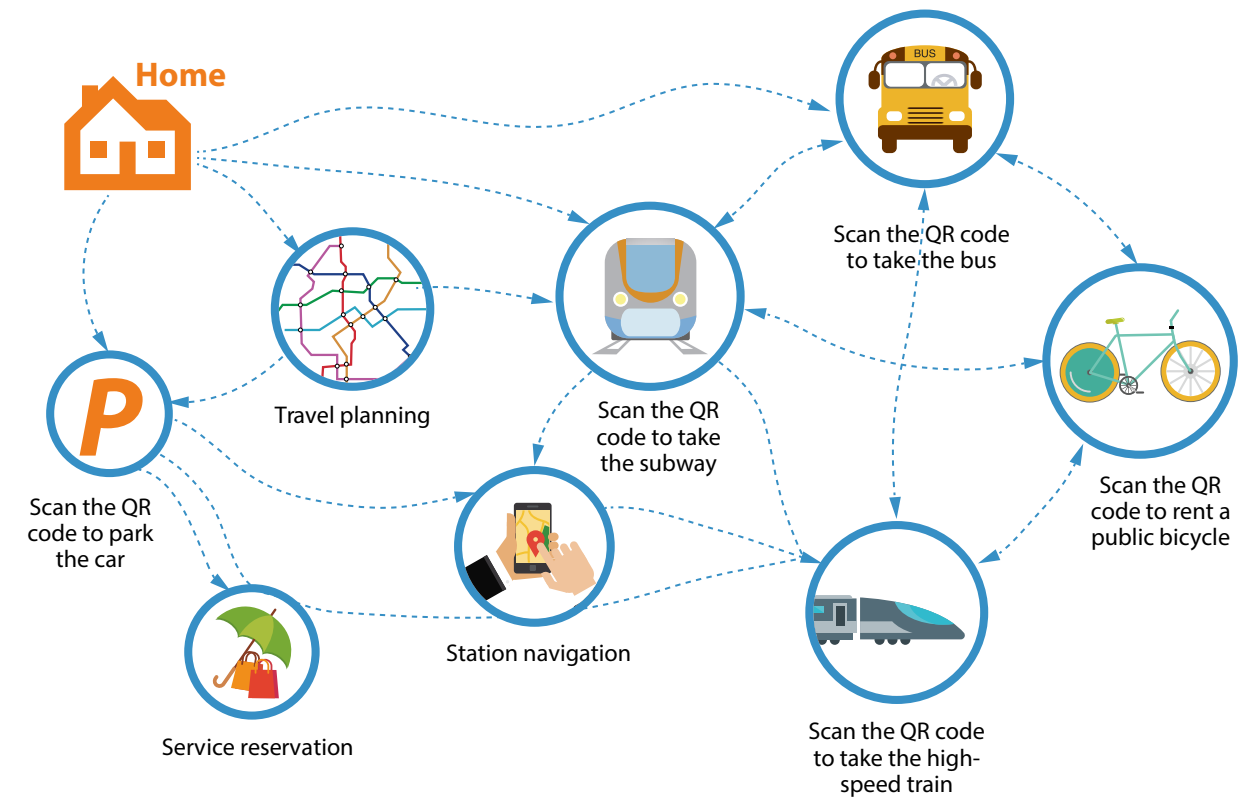


Case: "Mashangxing" comprehensive transportation service system

"Mashangxing" comprehensive transportation service system can provide "ticket purchase, ride, consumption, entertainment, office work" and other integrated services through smart phone. It has been successfully applied in Wuxi Subway, and will soon serve Fuzhou, Shijiazhuang, Shenyang, Kunming and other cities.

With "Mashangxing", passengers can go through entry gates quickly with a simple scan to avoid the inconvenience of purchasing cards, recharging, looking for change, and queuing for tickets; in this way commuting efficiency can be improved, and passengers can enjoy smart, convenient, and fun rides. "Mashangxing" provides citizens with integrated travel solutions with zero wait in travel, zero conversion in payment, and zero distance in services.

Building multi-mode intelligent travel based on rail transit passenger flow big data



Shared development

Building a community of shared future is the basis of development and the source of strength for CRRC. In 2017, CRRC took advantage of technology, products, and brands to connect with the national strategy, lead the development of the industry chain, and actively implement strategic planning such as strengthening the country with science, technology, quality and traffic, digital China, and smart society. On the other hand, CRRC also accelerated the promotion of full-scale internationalisation, actively implement the “going out” strategy, and strived to build a world-class enterprise with global competitiveness.

Promoting the coordinated development of the industry chain

In accordance with the principle of “relevant diversification, high-end positioning, and industry leadership” and relying on the core technology advantages of rail transit equipment, CRRC focuses on new materials, wind power equipment and environmental protection water treatment equipment, extends to related industries and vigorously expands strategic emerging industries.



Case: Powerful offshore wind turbine

On January 16, 2017, CRRC Zhuzhou Motor successfully built the first semi-direct drive wind turbine in China with large power output- a 6 MW semi-direct drive permanent magnet synchronous wind generator. It is the first generation of high-power semi-direct drive permanent magnet synchronous wind generators tailored for Chinese offshore wind turbines and will become a cutting-edge weapon for accelerating the development of offshore wind power green energy in China.



Case: CRRC has built “World sky plough” to promote development of the country’s high-end marine equipment

In 2017, the UK base of CRRC ZIC has made a deepwater trenchplough with the biggest tonnage in the world. The trenchplough is 23.5 meters long, 15.5 meters wide and 9.1 meters high with an area close to the size of a basketball court. Its total weight is 178 tons. With the help of surface support mother ship, it can dive to the sea floor at a depth of 1,000 meters for pipe-laying operations. A maximum of 1,000 meters of oil and gas pipelines can be laid every hour. This is the seabed oil and gas pipeline laying equipment with biggest working range and highest working efficiency at present.

Actively implement national strategy

CRRC takes the initiative to relate to the national strategic requirements and its own development needs, actively participates in national strategic initiatives such as the western development, the rejuvenation of the northeast, the rise of the central region, the development of the Yangtze River Economic Belt, the synergetic development of Beijing-Tianjin-Hebei, and the construction of Xiong’an New District. Bringing into play its own advantages, adapting to the pulse of the times, coordinating overall layout, seizing opportunities for development, implementing innovation-driven, comprehensively deepening reforms, enlarging state-owned capital, enhancing the quality of development, CRRC is striving to build a world-class enterprise with global competitiveness.



Case: CRRC will tailor the municipal express train for Beijing New Airport

Beijing New Airport construction is a major landmark project for the synergetic development strategy of Beijing-Tianjin-Hebei. As a dedicated line serving the air passenger flow of the new airport, the New Airport Line is a city express that will connect Beijing New Airport and the city center, and will also be an important line for the integrated transportation of Beijing-Tianjin-Hebei. The municipal express train used in the New Airport Line will be built on the basis of the CRRC CRH6F intercity multiple unit technology platform with a maximum speed of 160 km/h. The train not only has the advantages of large passenger carrying capacity, quick start and stop, rapid entry and exit of subway carriages, but also equipped with the benefits of high-speed multiple units, such as high speed and high comfort, and is particularly suitable for the operation demands of municipal express such as “speed, large traffic volume, public transportation and comfortable riding”. At the same time, the train will have fully automated driving functions.

As an airport express rail line, the Beijing New Airport Line will achieve the seamless connection between the city terminal and the airport. The train will be equipped with a luggage cart to allow passengers to check-in and check baggage at the departure station, realising the “separation” between man and luggage in advance.



Case: CRRC researches and develops the Beijing-Zhangjiakou High-speed Railway intelligent multiple units to serve the “2022 Winter Olympics”

For the special needs of the Olympic Winter Games, the trains of Beijing-Zhangjiakou High-speed Railway multiple units have been equipped with a -fully-equipped media carriage. Through 5G technology, the passengers in this carriage will be able to edit and send event reports at any time. The train also features humanistic seating areas for the disabled with barrier-free designs such as wheelchair fixing device, SOS button and foldable table. The customised winter sports equipment storage area will make the train a genuine “Olympic train” during the Winter Olympics.

The construction of the Beijing-Zhangjiakou High-speed Railway started in April 2016 and is expected to be completed by the end of 2019. The total length is about 174 kilometers. After the completion of the project, travel time from Beijing to Zhangjiakou will be reduced from 3 hours 12 minutes to less than one hour.

Advocating global collaborative construction and sharing

The geographical space for economic development has already broken through national borders, and global connectivity have become major development trends. CRRC adheres to open cooperation and actively promotes the five-in-one cooperation program of "Product + Technology + Capital + Management + Service". We have successively established rail transit equipment production bases in the United States, Malaysia and other countries, and realised the overall output of products, technologies, and industrial chains. We have carried out strategic cooperation with outstanding companies such as Deutsche Bahn and Siemens to fully draw on the advantages of the high-end equipment industry and provide integrated solutions for global collaborative construction and sharing in planning, design, construction, operation and maintenance.

In order to build itself into a respected international company, CRRC is not only promoting all of its business lines for "going out", but also actively promoting its professional skills and corporate culture to "going out". It also cooperates with a number of well-known international schools and research institutions in talent cultivation and introduction, enhancing CRRC's international competitiveness and brand recognition.



Case: American employees come to China to learn how to build metro cars

In early April of 2017, 32 production, managerial staff and workers from CRRC's Springfield Plant in the United States went to CRRC Changchun for three-months of training. CRRC Changchun has developed detailed training programs for these American workers to help them get professional qualifications.

CRRC not only provides high-quality products, but also integrates deeply into the economic development and cultural life of various countries. CRRC endeavors to serve as "a culture interpreter, a talent incubator, an industry propeller and a good neighbor in the community" by implementing the "Five-pronged Localization-" international operating model including "localised manufacturing", "localised procurement", "localised employment", "localised maintenance" and "localised management", and thus building itself into a respected corporate citizen.

CRRC has 13 overseas R&D centers and more than 5,000 foreign employees. CRRC has established localised manufacturing bases in countries such as Malaysia, Turkey, and India to help these countries where the projects are located create jobs and tax revenues and improve their development in the rail transit industry.



Case: CRRC ZELC vigorously promotes Malaysia's development in rail transit

In Malaysia's rail transit market, CRRC has started from scratch, and it now has the largest market share in Malaysia. This is not only because we have a reliable product quality, and we serve customers around the clock to meet their needs, but also because we actively integrate into and promote the development of local society, and we vigorously promote Malaysia's development in rail transit to satisfy local people's needs for convenient and safe travel. In 2017, CRRC successively sent a number of local Malaysian employees to study at higher education institutions in China to train talents of high-end rail transit equipment for Malaysia. It has successively introduced multiple supply chain companies to invest in Malaysia to enhance local ability to provide the auxiliary items and the local employment. At the same time, CRRC, developing together with the community, also actively participated in disaster relief activities and organised events such as a "Factory Open Day".

13 overseas R&D centers

More than 5,000 foreign employees

CRRC Springfield base in the USA



A favorable environment is the most equitable public product, and also the most inclusive well-being for the people. To make contributions to green hills and clear waters, create a more favorable environment, and promote the sustainable development of human society are the obligations and responsibilities of CRRC. CRRC is committed to the application of green and low-carbon technologies, and continuously promotes the harmonious development of enterprises and nature.



BUILDING A BEAUTIFUL ENVIRONMENT



CRRC Green products and services



Pursuit for low-carbon society

Today, green transportation has become an important choice for building low-carbon cities. Upholding the concept of green development, CRRC provides the world with more green, smart, energy-saving and environment friendly new transportation equipment products.

Independently develop standard EMUs, leading the world in energy conservation and environmental protection

The "Fuxinghao" EMUs adopts a new resistance streamlined head shape and sleek design. In addition, the train has more elegant lines and is more energy-efficient. With enlarged cross-section and space, the resistance of the train is still 7.5%-12.3% lower than that of the existing CRH380 series. When running at a speed of 350 km/h, the energy consumption per 100 kilometers per person is reduced by about 17%, which effectively reduces the energy consumption of the train operation.

CRRC signed the first deal for hydrogen-powered trams in China

CRRC Sifang won the bid for the construction of the Foshan Gaoming Modern Tram Demonstration Line, marking the official commercial launch of hydrogen-powered trams, which has a positive demonstration effect for the application and promotion of hydrogen-powered trams in China.

The hydrogen-powered tram is a new type of modern tram. Different from the conventional modern tram, it uses hydrogen fuel cells for power. It can achieve "non-contact network" running during the entire trip, and has "zero emissions" because only water is discharged. It is safe, reliable, sightly, and environment-friendly.

Promoting green technologies

Through our advanced technologies and high-performance equipment in rail transit, CRRC strives to achieve environmental protection technology innovation and green synergetic development. The scale of the green industry continues to expand and the market influence continues to increase.

CRRC focuses on the green industry and fully expands the new space for green development. Through vigorous efforts to develop the environmental protection industry, CRRC successively won the bid for sewage treatment projects such as projects in Danling Sichuan and Changshu Jiangsu, with a total bid of billions of yuan. Through the implementation of the national rural sewage treatment demonstration project, CRRC helped improve the ecological environment and made contributions to the construction of beautiful rural areas.

In 2017, we signed a wind power motor supply contract with Germany's Senvion, marking the first batch of China's megawatt-class wind turbines entering the EU.

Water environmental governance across the region

On January 15, 2017, CRRC Shandong formally signed the PPP Project of Danling water environmental comprehensive governance with Danling County, Meishan City, Sichuan Province. The project is the first county-wide comprehensive water environmental governance project in Sichuan Province and involves seven specific subprojects, including subprojects for urban water supply and drainage, township water supply and drainage, pipe network maintenance, and rural domestic sewage, covering all businesses of the water market.

In recent years, through our advanced technologies and high-end equipment in rail transit, CRRC has provided better solutions for decentralised wastewater treatment in villages and towns, and has been equipped with the ability of water environmental comprehensive governance for different environments, terrains and climatic characteristics.

Roof household photovoltaic power generation

CRRC's household photovoltaic power generation system is a distributed power generation system that converts solar energy into electrical energy using photovoltaic panel components laid on roofs. It is stable, reliable, safe, clean and efficient. On a 30-square-meter roof, 3 kW of solar power capacity can be installed, and the annual power generation capacity can reach 3,000 kWh, equivalent to reducing carbon dioxide emissions by about 3 tons per year. The amount of electricity generated by the photovoltaic system will be given priority for home use, and excess power can be sent to the grid, so that every family home can become a private power station.

The CRRC household photovoltaic power generation system also provides users with a professional monitoring APP to help users quickly and easily view the various data of the photovoltaic power generation system.

Shared packaging

In 2017, CRRC released a new modern intelligent logistics transport model - "Shared packaging" solution.

CRRC's "Shared packaging" adopts serialised and standardised packaging containers, the number of which put on the market is based on customer demand. The fee is based on the number of uses, with a single price far lower than the price of the wooden packaging of the same specification. Shared packaging enables shared use and circulation among different customers and regions, realizing resource integration and conservation. "Shared packaging" has provided the manufacturing industry with a brand-new logistics mode, realising the shift from the common possession of packaging resources to the common use of packaging resources, which achieves a win-win situation and helps promote environmental protection.

Beijing's new landmark "China Zun" uses CRRC's products

"China Zun" has a height of 528 meters and will be the tallest building in Beijing after its completion. The 690V/1,100-kW refrigerant air-conditioner inverter provided by CRRC ZIC for "China Zun" is the onboard inverter with the maximum capacity in the global HVAC industry. This centrifugal unit is above the national first-level energy efficiency standard, and the comprehensive energy efficiency in all condition is increased by more than 30%, with significant energy-saving effect. This product breaks through the technical bottlenecks of limited low-voltage AC variable-frequency capacity and other limitations, and has a qualitative breakthrough in energy-saving and reliability. Compared with fixed-frequency centrifugal units, its energy efficiency is improved by more than 40%, and thus it is a significant innovation.



CRRC's Qinghai Beixiang photovoltaic power station



To build a respected international company can not be done without the hard work of every employee, and employees and the company have become an inseparable community of shared future.



FOSTERING EMPLOYEE DEVELOPMENT



“High-Speed Rail Craftsman”

The "high-speed rail craftsmen" who have been forging ahead from generation to generation have inherited the 100-year accumulation of the achievements of China's rail transit equipment manufacturing industry and have made China's high-speed rail business a success. They are the creators, witnesses, and practitioners of China's high-speed rail success, and also are the true backbone of China's high-speed rail business and the firm cornerstone of CRRC's development.

CRRC has always regarded high-skilled personnel training as a top priority. It is building a knowledgeable, skilled and innovative workforce to help achieve more sustainable development with higher quality, better efficiency and more optimal structure.

CRRC has shaped the spirit of China's high-speed rail workers with the essence of "serving the country through industry, winning through innovation, and accelerating the realisation of the Chinese dream."



Case: CRRC honored 58 “high-speed rail craftsmen” in 2017

On August 18, 2017, CRRC held the commendation meeting for "high-speed rail craftsman", and 58 employees representing the highest level of skill of CRRC won the award for "high-speed rail craftsman". Among them are 11 national model workers, 7 Chinese skill award winners, 31 national technical experts, 30 people receiving special government allowances from the State Council, and 2 foreign employees from companies in UK and Germany.



Case: On the “railway craftsman”

The safety and quality of China high-speed railway exhibit the “craftsmanship spirit” of generations of railway workers. The selfless dedication of the 50s, the devotion and passion of the 60s, the diligence of the 70s, the academic excellence of the 80s, and the innovation of the 90s, all reflect the inquiring spirit, devotional spirit and missionary spirit of the “railway craftsman”.

The 60s generation: Li Wanjun, the “academician among workers”

As a senior technician of CRRC Changchun, he stood fast and remained at his post with a welding gun for 30 years and made himself a master in welding from an ordinary welding worker. He is skillful himself and his apprentices are also amazing. Since its establishment the “Li Wanjun Workshop” has overcome more than 100 technical difficulties and obtained more than 20 national patents. A dozen of his apprentices have won the title of “Chief Technician of the Province”. He also wrote the Standard Operation Procedure for Bogie Rivet Welding and Artistic Standards of Welding, and thus was called the “academician among workers”. In 2017, Li Wanjun was selected as the person of 2016 who “Touched the Heart of China”.

“ Li Wanjun: My pursuit is simple. I hope all welding workers can engrave the welding standards on their mind and make the products under their welding guns perfect. ”

The 70s generation: Ning Yunzhan, chief grinder of high-speed railway

As the senior technician of CRRC Sifang, he was the first person in China to grasp the grinding skill of the bogie for 380A trains. The process he is responsible for needs manual grinding in all high-speed railway production lines all over the world. The space for grinding is only 0.05 mm which is as fine as a hair, in which he carries out his skills. In 2017, he won the honorary title of National Moral Model of the Sixth Session (in the category of professional dedication).

“ Ning Yunzhan: As craftsmen, we work with our skills, get down to earth and make every effort to finish our work perfectly until we are too old to work. ”

The 80s generation: Daniel Nickel, leader of comprehensive production and management department of SIMMERN factory

As the leader of comprehensive production and management department of SIMMERN factory of Boge, he leads the factory's MES optimisation project which aims to enhance production efficiency and reduce material losses and labor intensity of workers to make the production process more energy-saving, more environment-friendly and safer.

“ Daniel Nickel: There is room for improvement in any process and any department. ”

Respecting talents

Talent comes first in the innovation and development of CRRC. By adopting "61162" talent program, international talent cultivation "631" program, CRRC seeks to bring in innovative talent and strengthen the selection and cultivation of talent with core qualities in technology, management and skills to offer broader platforms for all kinds of talents. By the end of 2017, CRRC had a total of 176,754 employees.

Foreign employees

3%

Minority employees

3%

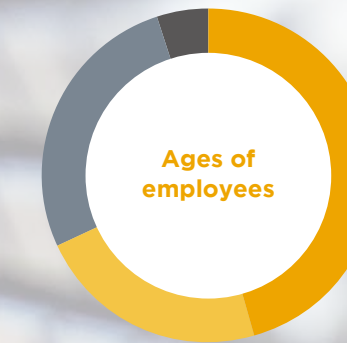
Female managers

32%

Female employees

19%

Overview of employees



By introducing international talent and exporting domestic talent, CRRC seeks to strengthen international exchanges in talent, knowledge, culture and skills to drive the continuous development of the company.



Case: "Global Hawk E Program" of CRRC ZIC

The "Global Hawk E Program" of CRRC ZIC seeks to cultivate a batch of international talents with global strategic views, market pioneering spirit and management and innovation capabilities. It offers 89 training courses, covering financial management, human resources, strategic planning, operation management, audit and risk control and project management. Over the past three years, it has offered a total of 630 training hours, trained a total of 396 trainees, and planned and promoted 29 international topics in professional field, of which, over 60% topics have been transferred to or applied in actual projects and more than 20% trainees have participated in international management/projects or obtained the opportunity to go abroad.



Case: Recruitment of global talent

In October of 2017, CRRC went to the US to conduct the second global recruitment of international talent. It organised special recruitment activities in Massachusetts Institute of Technology, Stanford University, The University of Chicago and other universities, and signed contracts with 52 outstanding talents, of which there were 7 with PhDs, 42 with master's degree and 5 experienced talented persons.



Case: Listed as TOP50 best employer for Chinese undergraduates

CRRC was listed on the "Fifteenth Session of TOP 50 Best Employers for Chinese Undergraduates", "TOP 10 Best Employers for Overseas Students" and "Fifteenth Session of TOP 15 Best Employers for Chinese Undergraduates in Aerospace and Manufacturing" by the China Employer Brand Festival in 2017.

Training platform

Through establishing CRRC University, learning as apprentices from technicians, "Golden Blue Collar Plan" studios, professional skill competitions and other talent cultivation platforms, CRRC seeks to strengthen the construction of talent teams and help employees to realise personal development. In 2017, CRRC delivered a total of 85 company-level training programs and with a total of 3,700 person-times training, the training focused on good leadership, core management talent and other key programs. In 2017, a total of 476,000 person-times training with subsidiary-level and workshop-level were provided, of which 71,000 person-times training were for management personnel, 68,000 person-times in professional technician training and 337,000 person-times were skilled personnel training.



Case: The Second CRRC Professional Skills Competition and the Second Youth Professional Skills Competition

In November of 2017, the biennial CRRC "Craftsman Olympics" - the Second CRRC Professional Skills Competition and the Second Youth Professional Skills Competition were held in Changchun and Nanjing. The participants were all craftsmen from the production frontline.

The top three winners were awarded the title of "National Skillful Master-hands" by the Ministry of Human Resources and Social Security, and top three winners under 35 years old were awarded the title of "National Youth Master-hands" by the Central Committee of the Communist Youth League of China. Winners who take the 4th to 7th places in the competition were awarded the title of "National Enterprise Skillful Master-hands" by the State-owned Assets Supervision and Administration Commission (SASAC) of State Council, of whom, winners under 35 years old were awarded the title of "National Enterprise Youth Skillful Master-hands" and corresponding honorary titles of CRRC.

3 more experts winning the national "Ten-thousand Talents Program"

Career development

In 2017, CRRC comprehensively started the construction of a global integrated talent management system and launched the innovative talent cultivation mode to establish the domestic and overseas talent flow mechanism and offer broad development platform for employees through clear career development path and strategic talent cultivation plan. In 2017, there were 3 experts newly listed on the national "Ten-thousand Talents Program", 1 person for national candidate for the "Millions of Talent Project" and 12 persons won "Mao Yisheng Railway Engineer Award".

1 more national candidate of the "Millions of Talent Project"

Through scientifically designed talent planning, path, grade and evaluation criteria, CRRC seeks to perfect the multidimensional career development path for talents and build the performance assessment and management system which can elevate both capability and performance of employees and the "talent assessment center" covering full range of "evaluation, appraisal and assessment" to offer comprehensive, professional and impartial career development platform for employees.

12 more persons winning "Mao Yisheng Railway Engineer Award"



Happiness in CRRC

CRRC sticks to a base line of guaranteeing the rights and interests of employees, carrying out helping activities, promoting team spirit, motivating innovation and diligence, building harmonious labor relations and driving the sustainable, healthy and comprehensive development of the company through various cultural activities.

Protection of rights and interests

CRRC attaches great importance to and safeguards the lawful rights and interests of all employees and signs labor contracts with all employees in strict accordance with laws and regulations of the *Labor Law* and the *Labor Contract Law* of China. It makes all efforts to eliminate discrimination by gender, nationality, religion, age and other aspects in terms of recruitment, compensation and training and prohibits the employment of child or forced labor to ensure that all employees can enjoy fair, impartial and open work opportunities.



Case: CRRC DLOCO established the Dalian Employee Medical Mutual Fund

CRRC DLOCO revised the *Measures of Administration on Employee Cooperative Mutual Fund of the Company* in 2017, which specifies the basis for management of employee medical mutual fund and the contribution amount of the corporate administration, labor union and the employees themselves and provides system guarantee for the employee medical mutual fund to serve employees more legitimately. In 2017, CRRC DLOCO assisted 608 qualified employees to join Dalian Employee Medical Mutual Fund to alleviate the medical economic burden on employees with illness.

Occupational health

CRRC puts emphasis on the life and property security of employees, safeguards the rights and interests of employees in occupational health and adheres to the principle of "people first and safety first" to build "safe CRRC" and "healthy CRRC".

In 2017, all manufacturing-type primary subsidiaries have established and maintained occupational health and safety management system and continued to carry out activities such as "National Safety Production Month", "Fire Control Propaganda Month" and "Occupational Disease Prevention Week" to create a good atmosphere for safe production. There were no fatal accidents or major injury accidents due to responsibility in safe production, and no newly discovered occupational diseases for current posts throughout the year of 2017.



Case: CRRC Erqi Locomotive carried out fire accident emergency rescue drills

In 2017, during the National Safety Month and Beijing Fire Control Propaganda Month, CRRC Erqi Locomotive carried out a fire accident emergency rescue drill which was participated in by more than 800 employees. The fire accident emergency rescue drill enhanced the awareness of employees to prevent accidents and their ability in accident rescue and handling and exercised the practical ability of emergency rescue team.

Employee care

CRRC attaches great importance to the happiness of employees and creation of harmonious corporate atmosphere. In 2017, CRRC continuously carried out activities including "sending gifts to six types of employees and paying attention to three types of employees" and "financial assistance to students in Autumn", bringing warmth and caring to employees and their families.

Meanwhile, all subsidiaries also organised diversified recreational and sports activities, such as sports competitions, parent-child activities and cultural fellowship activities, to enrich their life in spare time.



Case: CRRC Changchun held a fun sports meeting and cultural fellowship activity

In May, 2017, CRRC Changchun held the third fun sports meeting "Running Youth". More than a thousand young people participated in this activity and a team of foreign employees from CRRC American company also took part in this activity to experience CRRC culture.

During the Dragon Boat Festival, CRRC Changchun held an outdoor cultural fellowship activity themed "Gather together for the Dragon Boat Festival" and invited 24 employees from CRRC American Springfield Factory. The activities included making rice dumplings, calligraphy talent show, and, interactive games, allowing foreign employees to experience the charm of Chinese traditional culture and the warmth of CRRC.





Case: CRRC Zhuzhou Motor organised female employees to do outdoor Yoga

In June 2017, CRRC Zhuzhou Motor organised the female employees to do Yoga in the morning sunshine on the top of Jiulang Mountain.



Case: CRRC Yonge held the "Mass Fitness Program and 11th Climbing Stork Tower Competition"

On June 3, 2017, CRRC Yonge Company organised more than a thousand employees to hold the "Mass Fitness Program and 11th Climbing Stork Tower Competition" at the Stork Tower, a famous historic and cultural tower in China. It exhibited the courage and fighting spirit of CRRC employees and reflected the good wishes of CRRC to achieve new heights.



Case: CRRC Shenyang held an employee singing contest

In May 2017, the employee singing contest named "The Voice of Shenyang Company" was held with passion. Singers from all units of the company participated in the wonderful contest, fully reflecting the high and positive spirit of CRRC employees.



Case: CRRC ZELC established the "Reading Bar"

The "Reading Bar" is a nonprofit public reading space established by CRRC ZELC, which includes more than 10,000 books and covers 436 square meters. By the end of 2017, a total of 134,920 visits were made to the facility. The "Reading Bar" offers zero threshold reading and is open to the public; it gives books, periodicals and children's books to readers for free; it has held 60 various cultural activities and launched the "Pleasant Talk" recital activities in 2017 to enrich the cultural life of the public.



Case: CRRC "transnational home building" action

CRRC started "the Belt and Road" trip, i.e., CRRC "transnational home building" action, to organize research, visit and convey greetings to expatriates so that they will feel confident, comfortable and relieved to work and live in foreign countries.



"Big hand holding small hand to draw the high-speed railway dream together" – parent-child interactive activity held by CRRC Yonge



By always adhering to the operation idea of being responsible, CRRC actively cooperates with local governments, enterprises and communities and takes advantage of local technologies, resources, funds, labour, etc. to promote local economic development and cultural integration while implementing its sustainable development strategy.



SHOULDERING RESPONSIBILITIES AS A CORPORATE CITIZEN



Employees conduct outdoor sports activities
(inside CRRC Malaysia factory)

Transparency and openness

We “go out” to exchange and share new technologies, services and ideas with all parties on the international stage and discuss the development of the industry together; we “bring in” to allow the public to know about CRRC and respond to social concerns in an open way by inviting the general public to visit factories and by holding public open days and other activities. On the internet, we actively communicate and exchange with all sectors of society by means of the CRRC website, newspaper, microblog, WeChat, etc. so that the public can better know about and support CRRC.

In 2017, CRRC took the third place in the top 10 central enterprises with best brand communication of 2017. The Analysis Report on the Brand Communication of Central Enterprises in

2017 published by SASAC News Center and the Big Data Research Office of the National Image Communication Research Center of Tsinghua University shows that the Company, ranks first in terms of responsibility bearing, image shaping, brand awareness, reputation, positive information release and many other indexes. In the 13th “2017 Best Public Relations Case Competition in China” held by China International Public Relations Association, CRRC won the gold medal for overseas communication for “Providing ‘Chinese Solutions’ for High-Speed Railways in the World – CRRC Berlin Rail Transit Exhibition Inntrans and Communication in 2016” and CRRC Yonge won the silver medal for overseas communication for “How to fit into the Indian market for Chinese brand – CRRC brand promotion in India”.



The first Public Benefit Sports Camp of Beijing and Hebei entered into CRRC Erqi Locomotive



Case: CRRC ZELC “Super Bowl”, the first modern professional center for China rail transit equipment enterprises

On December 26, 2017, the Scientific and Technological Culture Exhibition Center of CRRC ZELC, which is the first modern professional center for China rail transit equipment enterprises, was officially opened. The Technology and Culture Exhibition Center has a building area about 3,300 m² and a display area about 2,400 m². Its main body is of elliptic bowl-shape structure known as the “Super Bowl” without supporting columns in the middle to convey the special beauty of industry. The Center had nearly one hundred exhibits, sand table models and reconstructed scenes on three floors. Modern sound and light technologies including electrified glass and VR were employed to show the development history of CRRC ZELC for over 80 years and the globalisation process of its products and services in 18 countries and regions along “the Belt and Road”.



Case: 3rd “Car Fans’ Visit to CRRC” in Ziyang

In February, 2017, CRRC Ziyang held the 3rd “Car Fans’ Visit to CRRC”. Car fans were given the chance to get an insight into marvelous rarely known stories of exporting locomotives for “the Belt and Road” initiative, the creation of the “Panda sky train” powered by new energy and application of 3D printing technology in manufacturing of locomotives through a series of original activities and saw with their own eyes the legendary “multi-nation” track at the final assembly line of CRRC Ziyang.

Targeted poverty alleviation

We actively answer the call of the state by persisting in targeted poverty alleviation with e-commerce and establishing long-term poverty reduction mechanism with the help of the advantages of our "CRRC Go" platform. We have organised special poverty alleviation activities unique in CRRC such as "donations from volunteers" and "one-on-one paired assistance to study" to help people in poverty-stricken areas to become better off. In 2017, we directly invested a fund of Rmb 8.12 million for poverty alleviation to help Maiji District and Gangu County in Tianshui City, Gansu Province as well as Jingxi City and Napo County in Baise City, Guangxi Zhuang Autonomous Region.

In the same year, CRRC continues to provide e-commerce services for distinctive agricultural products in Tianshui City in Gansu and Baise City in Guangxi with online service platform featuring targeted charitable poverty alleviation in the mode of "CRRC Go + special local products" to present high-quality agricultural products from poverty-stricken areas to nearly 200,000 customers of CRRC in order to actually help them overcome poverty.



Case: CRRC Tangshan targeted poverty alleviation for Beigou Village

In 2017, CRRC Tangshan implemented the poverty alleviation policy of the State to promote targeted poverty reduction and help Beigou Village to shake off poverty in all-around manner. We developed the targeted poverty alleviation project - "Chinese Herbal Medicine Planting Demonstration Base" and invested to help peasant households with Chinese herbal medicine (platycodon grandiflorum) seedlings growing, deep well digging and installation of sprinkler equipment. This project has attracted 35 peasant households in land circulation. We have also built garbage pits and landfills to address garbage disposal, cleaning and transportation and improve the village environment and hygiene. In addition, we have helped university students in poverty to solve their educational problems.

Eight action programmes of targeted poverty alleviation

Funding investment

Allocate poverty alleviation funds based on project progress in consideration of the population in the poverty-stricken area, the degree of poverty, income levels, local conditions and fund use performance, to ensure project implementation quality and efficiency of fund use.



Industrial poverty alleviation

Promote mulberry growing and silkworm raising, PV power generation and other industries based on specific local conditions in poverty-stricken areas and create characteristic industry demonstration bases with poor villages as the core.



Poverty alleviation training

Organize training courses for cadres in poor villages to increase their administrative abilities, renew ideas, improve knowledge structures and enhance professional competence and capability.



Consolation sending

Allocate a special "heart-warming" fund for poor villages before Chinese Spring Festival every year.



Fund management

Establish and improve uniform and coordinated poverty alleviation fund management mechanisms to ensure such funds are used in strict accordance with project requirements.



Infrastructure construction

Focus on improving the living conditions of poor villages as a key poverty alleviation and development measure and persist in road construction, the transformation of dilapidated houses, improving of village environments and building water tanks and wells to enhance production and the living conditions of poor people.



Poverty alleviation research

Establish a mechanism for communication with local governments and relevant poverty alleviation units in the designated localities to ensure full implementation of supporting projects.



Poverty alleviation by CRRC party member cadres

Send five CRRC party member cadres to serve as deputy county magistrate in poor counties and as a first Party secretary in poor villages to help with local poverty alleviation affairs.



Volunteer service

We actively encourage CRRC staff to participate in voluntary activities including young volunteer activities, love for poor children and community convenience services to pass on love and promote civility and devotion in both helpers and witnesses.



Case: “Changchun Railway Vehicles Sisters” has been commended by All China Federation of Trade Unions and won the title of “National May 1 Women Pacesetter”

“Changchun Railway Vehicles Sisters” is a love-caring group founded in 2011. Originally this group was only made up of a dozen female members, but now it has developed into a volunteer group consisting of 37 people. In the past six years, they have visited 48 after-sales service stations and brought warmth and wishes for after-sales personnel far from home in remote places. During the Spring Festival of 2017, “Changchun Railway Vehicles Sisters” sent brand-new red socks for 280 environmental sanitation workers working hard in snow cleaning to express appreciation for their hard work on behalf of CRRC and citizens. Before Women’s Day, they were awarded the title of “National May 1 Women Pacesetter” by All China Federation of Trade Unions.



Case: Playing games with “broken angels”

On March 1, 2017, a young volunteer team of CRRC Qishuyan again went to the Sunshine Shelter Center located in Dongfang community, Qishuyan District, Changzhou City. They have been paired with the Center for six full years. Here they play games and make handicrafts together with mentally handicapped people and bring them selected books and gifts.



Case: “Love from CRRC” heart-warming visit to Dalian Children’s Village

Dalian Children’s Village is a private charity organization for very poor minor children of persons in prison. On March 7, 2017, the Guo Mingyi Support Team from CRRC DLRI went to Children’s Village to send them food and good wishes.



Case: Greetings for nursing home

Before the Dragon Boat Festival in 2017, a young volunteer service team from CRRC Sifang Institute went to Qingdao Fucai Nursing Home to send festival greetings to senior citizens there. Volunteers prepared nice green plants and food processors. During their visit, volunteers went to every room to send good wishes and gifts and talk to every one of senior citizens there.



Case: Quick CRRC donations for rainstorm disaster in Malaysia

In November 2017, an extraordinary rainstorm hit Penang, Malaysia with once- in-a-century rainfall. Landslides occurred in several places and over 3,000 people lost their home. The economy in Penang suffered great loss.

After learning of the disaster, Kuala Lumpur CRRC Maintenance Co., Ltd. and Malaysia CRRC Railway Transportation Equipment Co., Ltd., affiliates of CRRC ZELC quickly called for donations where their staff donated a total of 30,000 Malaysian ringgits.

Future prospects

The new age has fostered CRRC's development of new philosophy, mission and goals.

We strive to build a first-class enterprise and aim to shoulder our part of the responsibility to make China stronger. We actively align to national strategies and implement relevant tactics to give full play to CRRC's reputation and strength to enable development that is highly efficient, effective and of quality. We will take an active part in building "the Belt and Road" initiative, continuously improve towards international standards, and gradually penetrate into the medium to high-end global value chain. We seek to establish a leading role in international resource allocation, and to foster and create a world-class, high-end cluster of machinery equipment industry.

We strive to establish a dynamic first-class enterprise and be a pioneer in the reform of state-owned enterprises. We focus on industry transformation, innovative development pattern, intensify supply-side structural reform, accelerate enterprise restructuring and integration, increase quality and efficiency, promote transformation and upgrading, maintain and increase the value of state-owned assets, optimise state-owned assets, speed up pilot projects of diversified ownership systems and further invigorate, motivate and release dividends.

We will strive to build an industry-leading first-class enterprise to lead industrial development. We vigorously implement innovation-driven development strategy to build a core technology system with international competitive edge and internationally advanced product lines, take the high ground of global industrial technical development, serve as backbone of national economic and technological development, lead industrial development, increase international say and influence and set the direction of the global railway transportation equipment industry development.

We will strive to build a responsible first-class enterprise to contribute to the benefit of mankind. We fulfill people's need for a better life and provide the society and the people with environment-friendly and higher-quality products and services. We aim to create a community of shared future for CRRC and to gather the strengths of all related parties, in order to obtain mutual benefits and share development achievements. This allows us to provide staff with a rich and continuous sense of gain and happiness with security. We will actively build an all-round high-end image of CRRC to maintain our great reputation.

Positioned in a new historical stance, we will seize this significant and historical opportunity to embrace the new era and totake part in new development and take new action. With profound responsibility, an energised manner, vigor and diligence, we will follow through with our plans and vision with steadfast devotion topomote high-quality development in a united manner. CRRC will be created as a respectable, internationalised enterprise with global competitive edge and will ultimately contribute to the great rejuvenation of the Chinese nation.



Visit to Guanque Tower

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Feedback from readers

Dear readers,

Hello, Thank you very much for reading the 2017 CRRC Social Responsibility Report. We pay great attention to and expect to hear your feedback on CRRC's management, practice and reporting of social responsibility. Your comments and suggestions will help us to continue promoting the management and practice of corporate social responsibility. We look forward to your reply!

Multiple-choice questions (please tick✓ in the appropriate box)

1. Does the Report reflect the significant influence of CRRC on economy, society and environment?

Yes Somewhat No

2. Do you think the relation analysis of stakeholders hereof and CRRC is accurate and comprehensive?

Yes Somewhat No

3. Was the information provided in this report comprehensive?

Yes Somewhat No

4. Was the information provided in this report readable?

Yes Somewhat No

Open question

Please address any opinions and suggestions on the *2017 CRRC Social Responsibility Report*.

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