



Nanjing Panda Electronics Company Limited

SOCIAL RESPONSIBILITY REPORT

2019

About This Report

Reporting Period

This report is the 10th CSR report released by Nanjing Panda Electronics Company Limited (NPEC). The timeframe for the information and performance mentioned in the Report is January 1, to December 31, 2019. Additional information that pre-dates the stated reporting period or present the policy and practice of Nanjing Panda Electronics Company Limited in 2020 and some practices of Panda Electronics Group Co., Ltd. are also included.

Reporting Boundary

Nanjing Panda Electronics Company Limited and our subsidiaries (see the details in chapter of "About Us— Main NPEC subsidiaries.)

Reference

In this report, "NPEC", "the Company", or "We" refer to Nanjing Panda Electronics Company Limited, and

- Electronic Equipment Company refers to Nanjing Panda Electronic Equipment Co.,Ltd.
- Information Industry Company refers to Nanjing Panda Information Industry Co., Ltd.
- Electronics Manufacturing Company refers to Nanjing Panda Electronics manufacturing Co., Ltd.
- Communications Technology Company refers to Nanjing Panda Communications Technology Co., Ltd.
- Panda XinXing Industrial refers to Nanjing Panda XinXing Industrial Co., Ltd.
- JingHua Electronics refers to Shenzhen JingHua Electronics Co.,Ltd.
- Electronics Technology Development Company refers to Nanjing Panda Electronics Technology Development Company Limited

In addition, the report referred to "China Electronic Corporation" as "China Electronics" and "China Electronics panda Information Industry Group Co., Ltd." as "China Electronics Panda".

Data Sources

All information and data in this Report is from our internal official documents, statistical reports and annual report. The Board and the Directors of the Company guarantee that there are no false representations, misleading statements contained in, or material omissions from this report, warrant the truthfulness, accuracy and completeness of the content of this report, and jointly and severally accept responsibility.

Compilation Conformance

This report is prepared in accordance with Appendix 27 the Environmental, Social and Governance Reporting Guide of Hong Kong Exchanges and Clearing Limited, "Notice on Strengthening Listed Companies' Undertaking of Social Responsibilities and Notice on Further Improvement of Information Disclosure of Poverty Alleviation by Listed Companies released by Shanghai Stock Exchange. The report also refers to the GRI Sustainability Reporting Standards (2016), GB/T 36001-2015 Guidance on Social Responsibility Reporting and Electronic Industry Code of Conduct (EICC 5.0).

Report Format

This report is available in the electronic version and you can visit our official website (<http://www.panda.cn>) to read this report. For any question or suggestion about this report, please send us an email to dms@panda.cn or call us at (86 25) 84801144.

Catalog

About This Report

Message from the Senior Management	01
--	----

About Us	03
----------------	----

1.Strategy and Governance 07

1.1 Corporate Strategy	08
1.2 Corporate Governance	09
1.3 Risks Management and Compliance	11
1.4 Information Security	12
1.5 Intellectual Property	12
1.6 Technological Innovation	13
1.7 Party Building	14

2.Social Responsibility Management 15

2.1 Materiality Analysis	17
2.2 Stakeholder Engagement	18

3.Keeping Up with the Trend: Serving Society with Professional Advantages 19

3.1 Intelligent Manufacturing	21
3.2 Smart city	22
3.3 Electronic Manufacturing Services	24

4.Making Joint Efforts: Cooperating With Stakeholders for More Values. 25

4.1 Improving Customer Experience	27
4.2 Facilitating Employee Growth	33
4.3 Protecting Natural Environment	45
4.4 Supporting Industry Development	49
4.5 Engaging in Community	52

5.Appendixes 55

Content Index of ESG Reporting Guide	55
Reader Feedback	58

Message from the Senior Management

2019 marked the 70th anniversary of the founding of the People's Republic of China and was a critical year for building a moderately prosperous society in all respects and achieving the first centenary goal. Under the leadership of the Party Committee and the Board of Directors, together with the hard work of all employees and stakeholder cooperation, we have made new progress in serving economic development, protecting ecological environment and fulfilling social responsibilities.

We ensured steady operation to boost economic growth. In the field of intelligent manufacturing, we accelerated the development of industrial robot series products as well as operation and maintenance platform, successfully developed the 70kg/2.0m compact multi-purpose industrial robots, launched the Panda robot operation and maintenance management cloud platform, and actively promoted the construction of intelligent manufacturing factories of unmanned aerial vehicles. In terms of smart city, we stepped up our transition to a software and hardware system service integrator and general contractor, and further enhanced our core competitiveness of products with independent intellectual property rights. Regarding the electronic manufacturing sector, we tracked customer needs to accelerate the transition to component assemblies and extended from brown goods to white goods and automotive electronics. In 2019, we were awarded the "Advanced Unit for Intelligent Manufacturing in Jiangsu Province" and participated in the compilation of the Intelligent Rail Transit Information Technology Architecture and Network Security Specification, which was China's first "cloud" specification for urban rail transit.

We protected the ecological environment to build a green home. Following the philosophy that lucid waters and lush mountains are invaluable assets, we established an environmental management system in an effort to create a green, low-carbon and circular economic system. Meanwhile, we integrated environmental awareness into work and life by green office practices and various community-based public welfare activities while calling on more public attention to promoting ecological progress. To be a responsible procurer, we clearly

require that raw materials need to meet relevant environmental protection requirements in our procurement contract, and prioritize suppliers whose raw materials have low environmental impact. Such principles have driven the upstream and downstream partners of the industrial chain to consciously protect the environment. In 2019, our environmental protection input amounted to RMB 1.97 million, and no major environmental pollution accidents occurred throughout the year.

We focused on people's livelihood to create a harmonious society. To empower employee growth and protect the basic rights and interests of employees, we provided competitive compensation and benefits and built a smooth career development path for them by relying on large state-owned enterprise platforms. Moreover, we paid attention to employees' work-life balance and strove to build "a community of common destiny" for the coordinated development of NPEC and our employees. For establishing win-win partnerships, we also actively played a demonstrating and leading role in the industry by cooperating with industry partners, scientific research institutes and other stakeholders, making a positive contribution to the development of China's electronics industry. In addition, we facilitated the harmonious communities. Leveraging professional advantages, we actively gave back to the society and organized various public welfare activities to support targeted poverty alleviation and community development. In 2019, the average income of on-the-job employees increased by 8% year on year, and our employees provided a total of 1,020 hours of voluntary services.

Strong commitment to our pursuit will steer us towards greater success. In 2020, we will continue to uphold the vision of sustainable development and promote transformation and upgrading to build a "centenary NPEC" with high-quality development. Together with stakeholders, we will create a bright future.

Xia Dechuan
Executive Director and General Manager

About Us

Nanjing Panda Electronics Company Limited is a core company within China's electronics industry. It was founded in April 1992 solely by Panda Electronics Group Co., Ltd., the cradle of China's electronics industry. With its shares listed on the Hong Kong Stock Exchange and Shanghai Stock Exchange respectively in May and November 1996, the Company was first to issue A+H shares in domestic electronics information industry.

We have passed the ISO 9001 certification and established a thorough quality management system and an advanced enterprise management information system. We have also formed a comprehensive technical innovation system with five provincial & municipal-level engineering (technology) centers, new artificial intelligence research and development center, intelligent transportation equipment research and development laboratory and wireless communication application technology laboratory, taking the lead in scientific research and development in China. We have undertaken several important domestic key projects and were awarded the National Science and Technology Progress Award and Jiangsu Provincial Science and Technology Prize for many times. Our main subsidiaries have been rated as high-tech enterprises or software enterprises.

By the end of 2019, NPEC has 10 subsidiaries with 3,456 employees.



▲ NPEC Headquarters Science Park in Zhongshan East Road

Main Subsidiaries	Founding Year	Business
Electronic Equipment Company	2009	Promoting R&D of related technologies and achievement transformation with industrial robot and smart manufacturing as the development core; devoted to the cultivation and exploitation of smart manufacturing market, which have been applied in the fields of 3C electronics, flat panel display and logistics with its applicable technology
Information Industry Company	1998	A world famous provider for intelligent transportation distribution, ticket vendor sales and checks, communications and other system solutions, equipment and core modules; a provider of smart communities, smart home programs and products; a leading domestic intelligent building system integrator
Electronics manufacturing Company	2004	Mainly producing consumer electronics, communication equipment, medical treatment device, new energy technologies and automotive electronics with an annual production capacity of more than 10 million sets and mainly providing ODM services for international famous ICT enterprises
Communications Technology Company	2005	Engaged in research and development of products and systems for mobile communications, mobile Internet communications, and military-civilian communications; providing customized high-tech products and engineering complete sets of equipment for users, and services such as engineering installation and maintenance
Panda XinXing Industry	2009	Taking the integration of high-end service industry and advanced manufacturing as an important strategic choice for promoting the optimization and upgrading of industrial structure; providing all-round supporting and safeguarding operation services for all types of industries based on technological integration, and market demand
Jinghua Electronics	1980	Engaged in the R&D, manufacturing and sales of tablet computers, handheld digital TVs, voice recorders, electronic paper books and other IT digital products, navigator, car audio and other automotive electronic products and mobile communications and LED lighting products; other supporting business including precision molds, plastic-injection packaging, electronic components.
Electronics Technology Development Company	2011	Engaged in the development, manufacturing, sales, after-sales service and technical services of communications equipment, industrial control equipment, computers and external equipment, instrumentation, culture, office machinery, electrical machinery and equipment, packaging equipment and other general equipment, equipment of social public safety and other equipment and molds; computer software development and system integration services

▲ Main NPEC Subsidiaries

2019 Key Performance



Strategy and Governance

Corporate Strategy

In response to China's 13th Five-Year Plan and 'Made in China 2025' strategy, NPEC upholds the values of "Innovation and Entrepreneurship for Excellence", and keeps developing three core industries: intelligent manufacturing, smart city and electronic manufacturing services. The Company enhances its efforts to promote the transformation and upgrading of intelligent manufacturing and smart city industry through structural adjustment, quality and efficiency improvement, in hope of developing synergistic advantages and scale effect and realizing leapfrog development.

In 2019, the Company revised the midterm and later planning of the 13th Five-Year Plan timely in accordance with the characteristics of the industry, compiled the Special Planning Scheme for Intelligent Manufacturing—Implementation Plan and Decomposition Plan of NPEC, the Three-year Plan for the Electronic Sector and the Three-year Plan for the Communication Sector and released the Overall Development Report on NPEC's Strategic Emerging Industries (New Generation of Information Technology) after several rounds of special discussions.

Strategic goals

Build the company into a nationally leading electronic information enterprise that masters autonomous and controllable key technologies, increases its brand value and overall corporate value with increasing capacity of return on investment and continuously enhances and provides the industry-leading core products, equipment and system solutions of intelligent manufacturing and smart city.

Strategic plans

Develop the system integration services of intelligent manufacturing for core equipment and smart factories

Promote the four core businesses of smart city: intelligent transportation, safe city, intelligent building and informative network equipment

Develop electronic manufacturing services with first-class supply chain management capabilities to realize intelligent, flexible, lean manufacturing

Strategic guarantees

Institutional mechanism

Technological innovation

Fund raising

Human resources

Improved management

Brand promotion

Entering overseas markets

Merger & acquisition

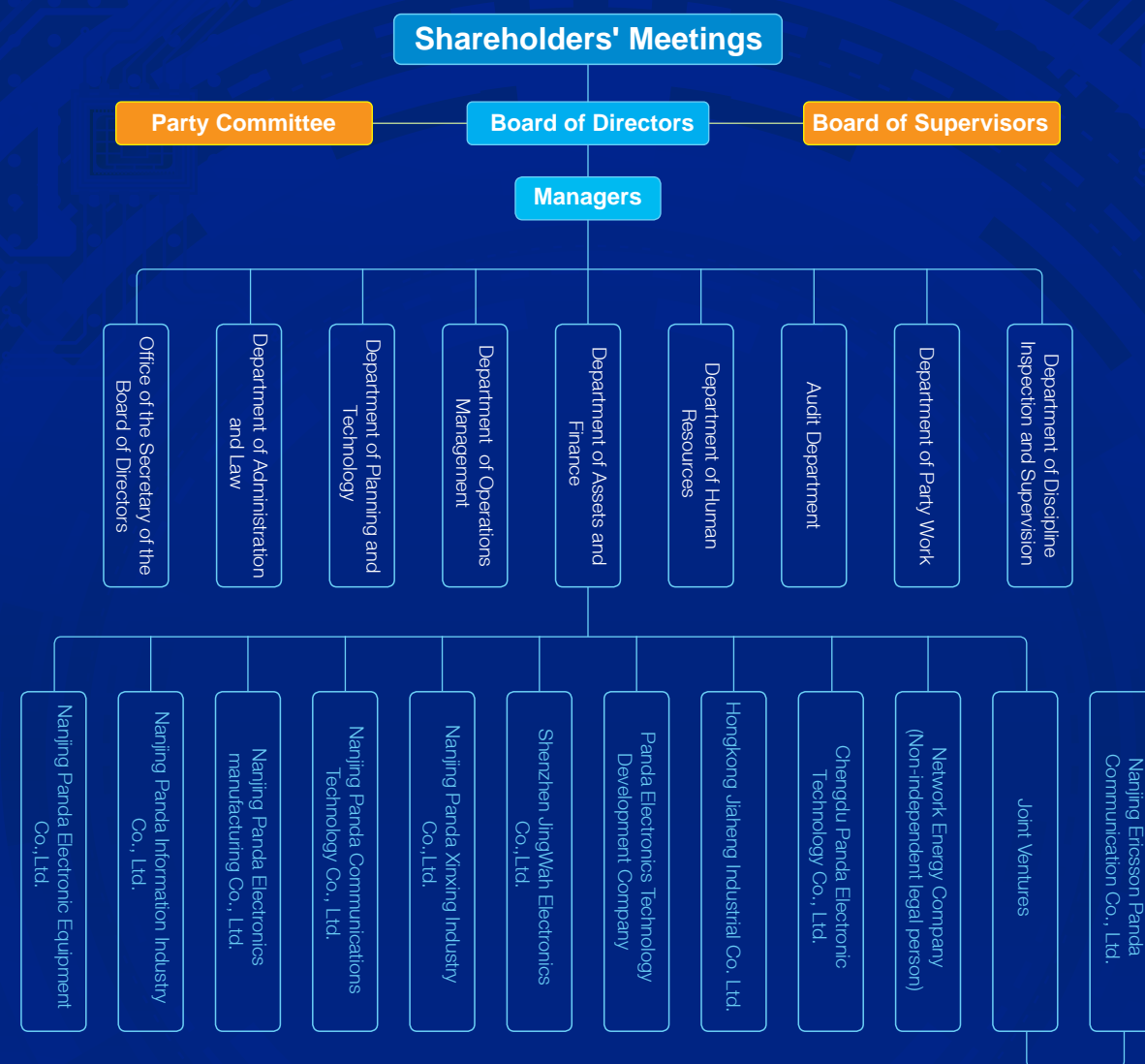
Strengthening market value management

▲ Strategic framework

Corporate Governance

In accordance with laws and regulations such as the Company Law and the Securities Law, and the provisions of China Securities Regulatory Commission (CSRC) and Securities & Futures Commission of Hong Kong on corporate governance, standardized operation, the Company continuously improves the corporate governance structure, risk management and internal supervision system as well as revises rules and regulations in light of our actual situation, striving to improve standardized corporate operation with high standard of governance.

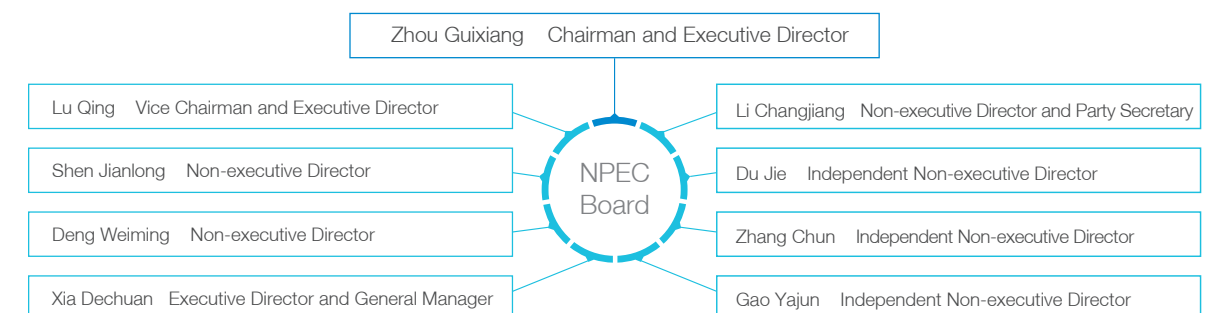
In 2019, NPEC promoted lean management and incorporated it into daily work. We formulated assessment methods to promote the standardized, professional, programmatic and systematic development of NPEC and our subsidiaries, and constantly improved internal management mechanisms to enhance our overall competitiveness. In 2019, 403 upgrading projects of various types were declared, with 342 approved and 295 completed, generating economic benefits of RMB 20 million. Since the comprehensive lean management launched in 2017, we have had more than 900 internal upgrading projects which have generated a profit of over RMB 50 million.



Organization structure

○ Directors, supervisors, senior managers

The Board of Directors of NPEC is composed of nine directors, including three executive directors, three non-executive directors and three independent non-executive directors. Independent non-executive directors account for one third of the Board.



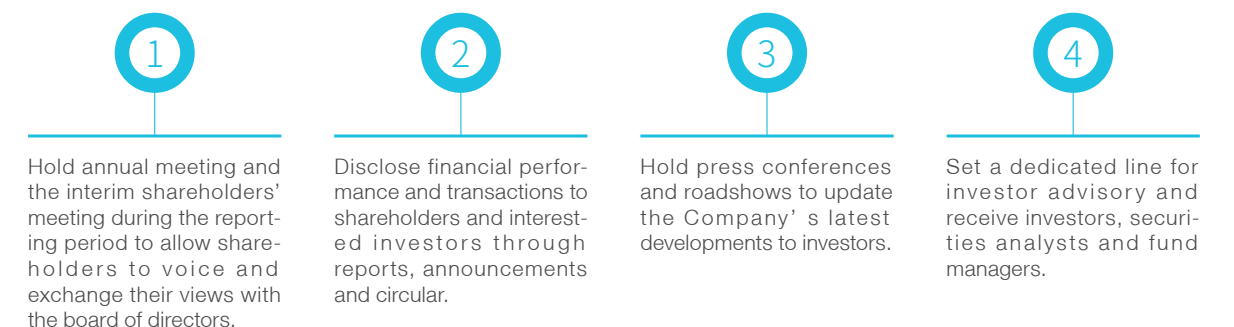
NPEC Board

○ Board of Directors

The Board of Directors is responsible for the Shareholders' Meetings. Its main responsibilities include convening the Shareholders' Meetings and reporting, implementing the resolutions of the Shareholders' Meetings, deciding on the Company's business plan and investment plan, appointing and dismissing the general manager and senior managers of the Company, etc. The Board of Directors is composed of Audit Committee, Nomination Committee, Strategy Committee, Remuneration and Evaluation Committee. They assist the Board of Directors in business and affairs management. In 2019, the Company held one shareholders' meeting, fourteen board meetings and six meetings of supervisory board.

○ Shareholder-investor relationship

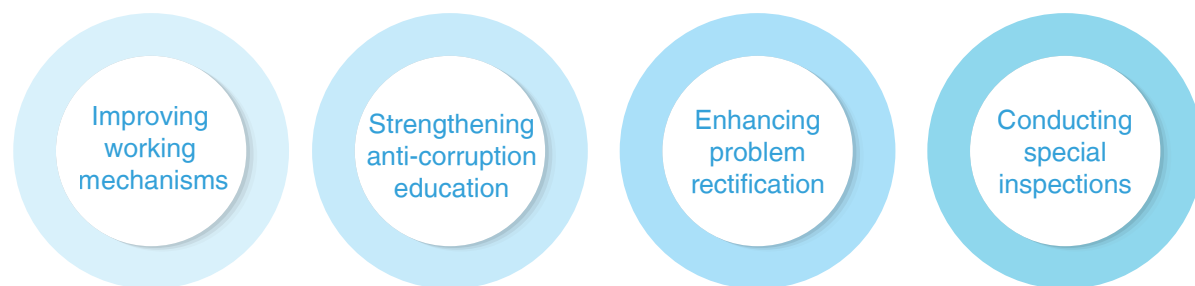
In accordance with the regulatory requirements of exchanges, we continuously improve information disclosure mechanism and disclosure system and maintain good interaction with shareholders and investors. To deliver important information of NPEC's development to shareholders and investors timely, authentically, accurately and completely, we keep full communication with shareholders and investors via reports, telephone, Internet, fax, E-interaction and other channels. In 2019, four periodic reports and 68 interim announcements were issued and eight shareholder/investor communication meetings were held.



NPEC's main communication channels with shareholders and investors

Risks Management and Compliance

Strictly abiding by national and local laws and regulations including Rules of Integrity and Self-discipline of the Communist Party of China, the Supervision Law, and Rules on Integrity of Executives of State-Owned Enterprises, we highlight anti-corruption work and avoid compliance risks to guarantee the sustainable, healthy and stable development. In 2019, 128 integrity talks were held, including 52 talks with middle-level officials prior to appointment and 28 talks for integrity reminders.



- We established a responsibility system, signed the letter to comprehensively strengthen Party discipline and the integrity letter with Party organizations at all levels. All middle-level managers signed the *Commitment to Incorruptible Practice*, implementing responsibilities at all levels.
- We formulated the *Key Points for Fostering Clean Governance and Anti-Corruption Work in 2019*, decomposed the annual work tasks, formed a table of monthly key work breakdown, and implemented them item by item.
- We conducted supervision, inspection, enforcement and discipline to prevent minor problems from turning into big ones.
- We actively carried out integrity education activities, organized personnel in key positions to visit the integrity education base and watch educational videos, and sent one-on-one supervision reminders to the members of the leadership and on-the-job Party members before the Spring Festival to clarify the requirements for integrity.
- For the Company's key construction projects, we organized an integrity education meeting, signed the integrity management responsibility letter with the project management staff, and signed the integrity letter with the construction unit, supervision unit, design unit, etc.
- We conducted self-examinations as required. On this basis, the Secretary of the Company's disciplinary commission has led Party members, disciplinary inspectors, and auditors to visit all units together for random spot checks on the implementation of inspection and rectification measures one by one.
- In accordance with the requirements of the *Notice on Special Rectification of Illegal Business Operations of Relatives of Leaders of Enterprises*, we organized employees to report and put on record.
- We carried out key supervision and inspection of the account books of official vehicles and business entertainment expenses of NPEC and the Information Industry Company.
- We proposed 12 specific rectification measures for three aspects and five problems of formalism and bureaucracy found out in the early stage of the company.
- We conducted integrity risk prevention and control, identified 47 integrity risk points, and proposed 134 prevention and control measures.

⚡ Key measures for anti-corruption and integrity in 2019

We continue to strengthen the comprehensive risk management system and regularly assess the effectiveness of risk management and internal control systems, thus developing a complete procedure and a mechanism to deal with major risks or internal control deficiencies. The Company's Board of Directors is fully responsible for setting up risk management objectives and policies, and assumes ultimate responsibility for those objectives and policies.

In 2019, the Company compiled a risk list, analyzed and sorted out 7 risk events and risk causes, and proposed targeted management measures and response plans. Based on the existing risk management system and risk prevention and control mechanism, we strengthened risk management across the board, carried out in-depth risk investigation and response, and fully implemented the 100% legal review requirement for major decisions, important systems, and major contracts. Nearly 3,000 employees participated in various types of law promotion activities.

Information Security

We strictly abide by relevant national laws and regulations on the protection of private information of customers as well as the Company's Regulations on Trade Secrets Protection. In accordance with the Regulations on the Use and Maintenance of Information Systems, we implement the level-by-level approval management of information system access permissions and standardize the management of tools, actions and processes of information carriers. In 2019, we did not receive complaints about violations of customer privacy.

In 2019, we formulated the 2019-2021 NPEC Information Development Plan and revised related information systems and regulations (Several Regulations on Information Construction, Regulations on the Use and Maintenance of Information Systems) in accordance with relevant national policy documents and industry standards and based on development strategies and work requirements, aiming to make the Company's information project better match actual needs, have more defined power and responsibilities and more transparent management processes. Based on the attributes of business and services, the Information Industry Company also implemented the IT service management system based on ISO 27001 and ISO 20000-1, and compiled and issued management documents.

Intellectual Property

NPEC sees innovation and effectiveness as the basic principle of patent application and management. The Company formulates the Management Measures for Patent and Copyright, to strengthen the technical patent application work, and incorporate the patent and copyright work into the technological management objectives and work systems of each subsidiary. In 2019, the Company was not involved in any intellectual property infringement.

The Information Industry Company passed the GB/T 29490-2013 Enterprise Intellectual Property Management standard compliance and received the guidance of third-party professional service agencies, thus achieving online management of intellectual property work and the life-cycle management of intellectual property. In October 2019, it successfully gained the re-certification of the intellectual property management system.

Key Performance:



111 patents applied in 2019



51 invention patents gained and 67 patents licensed in 2019
Authorized invention patents accounted for 1/3



13 new trademarks applied, including the newly registered "Panda Intelligent Manufacturing"

Technological Innovation

Technology is the driver for the corporate development. The Company encourages and supports innovation and constantly improves our technological innovation system. As of the end of 2019, the Company has established five engineering and technology centers at the provincial and ministerial level or higher, and set up the artificial intelligence R&D center, smart transportation equipment R&D laboratory, and wireless communication application technology laboratory, covering major business areas. The Company also completed the acceptance of two projects at the provincial level or higher and the appraisal of 20 provincial and company level technological achievements.



The FPD Engineering Automatic Transmission System project independently developed by the Electronic Equipment Company realized high-speed transmission, storage, and highly reliable operation of large-size ultra-thin glass substrates, and won the highest prize of the Fourth National Quality Innovation Award. This technology broke the international monopoly and achieved domestic production with independent intellectual property rights and world-class standard.

Key Performance: As at the end of 2019,

- RMB **245.2765** million invested in R&D
- A total of **687** members in the R&D team
- 6** science and technology awards and technological innovation awards at provincial and ministerial level or higher
 - The "R&D and industrialization of multi-mode emergency communication terminals based on autonomous and controllable software radio platform" successfully applied for a major project of the National Development and Reform Commission.
 - The "Key Technology and Application of Polymer-Based Wave Transmission and Protective Materials for High Frequency Microwave Communication" project was awarded the first prize of scientific and technological progress by China Petroleum and Chemical Industry Association.
 - "Ticket-out and cash-out slot of ticket vending machines" project won the first prize of Jiangsu Province Science and Technology Innovation Invention.
 - The "Proactive Collaborative Reconstruction Technology and Application for the Federated Edge Network" project and the "Key Technology and Application of New Generation Polymer-Based High-frequency Wave Transmission and Multiple Protective Materials" project won the second prize of Jiangsu Province Scientific and Technological Progress.
 - "AFC Key Technology Research Program Based on Mobile Payment Gate Passing" won the third prize of China Electronics Corporation (CEC) Civil Technology Progress.
 - "Forwarding Call & Face Recognition Smart Cloud Gate" and "Commercial Internet of Things Products for Smart Industry" won the awards of innovative products in Nanjing.

Party Building

NPEC always adheres to the principle of strict governance over the Party. We incorporate Party building into the Company's Articles of Association, earnestly implement the key tasks of Party building, and actively integrate it with production and management, providing guarantee for the Company's reform, development and stability. We have launched the campaign on the theme of "staying true to our founding mission", and continued to carry out activities such as the Party Pioneer Action, Worker's Pioneer, Youth Civilization, the Youth-Master Dialogue lectures, Achievements in the New Era, and skill competitions, to stimulate the working enthusiasm of Party members and the enthusiasm and creativity of employees, forming a new synergy to promote the high-quality development of the Company through high-quality Party building. In 2019, one team was awarded the Worker's Pioneer in Nanjing, one team was awarded the Chinese Company Cultural Building and Management Benchmark Team, one team was awarded the Central State-owned Enterprise Youth Civilization, one team was awarded the CEC Youth Civilization and one team won the Youth Civilization of Nanjing. A total of 9,835 participants were involved in Party building activities throughout the year.



In 2019, **1** team won the "Worker Pioneer" in Nanjing
1 team won the "Benchmark Team for Chinese Corporate Culture Construction and Management"
1 team won the "Central Enterprise Youth Civilization"
1 team won the "China Electronic Youth Civilization"
1 team won the "Youth Civilization" in Nanjing



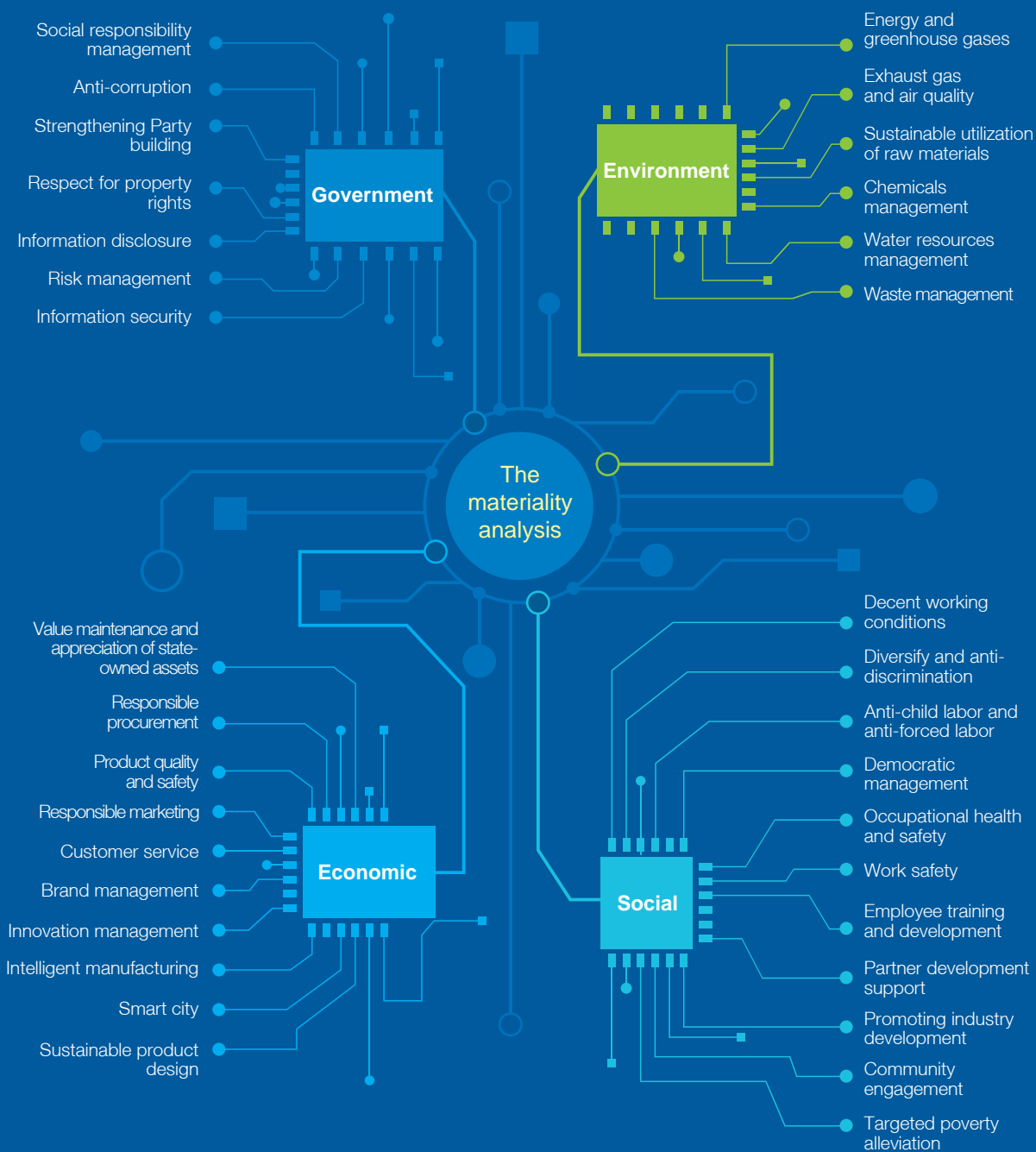
A total of **9,835** people participated in party building activities throughout the year

Social Responsibility Management

We work hard to provide customers with high-quality products and services, and create a safe and decent working environment for employees. Strictly following the requirements of relevant regulatory authorities, we regularly disclose social responsibility information every year to improve the transparency of operations. Through communication with stakeholders, we learn about and respond to their expectations. Focusing on key social responsibility topics, we define clear management direction and action goals, and decompose them to relevant responsibility departments to guide and keep improving the implementation of specific social responsibility work.

Materiality Analysis

The material analysis is the core for foundation of social responsibility management and disclosure. In 2019, considering the hot topics, national policies and industry trends and other background information, the Company comprehensively analyzed and sorted out the material topics library, and confirmed material topics of the Company at this stage after discussion by the board of directors by means of interviews and questionnaires.



Stakeholder Engagement

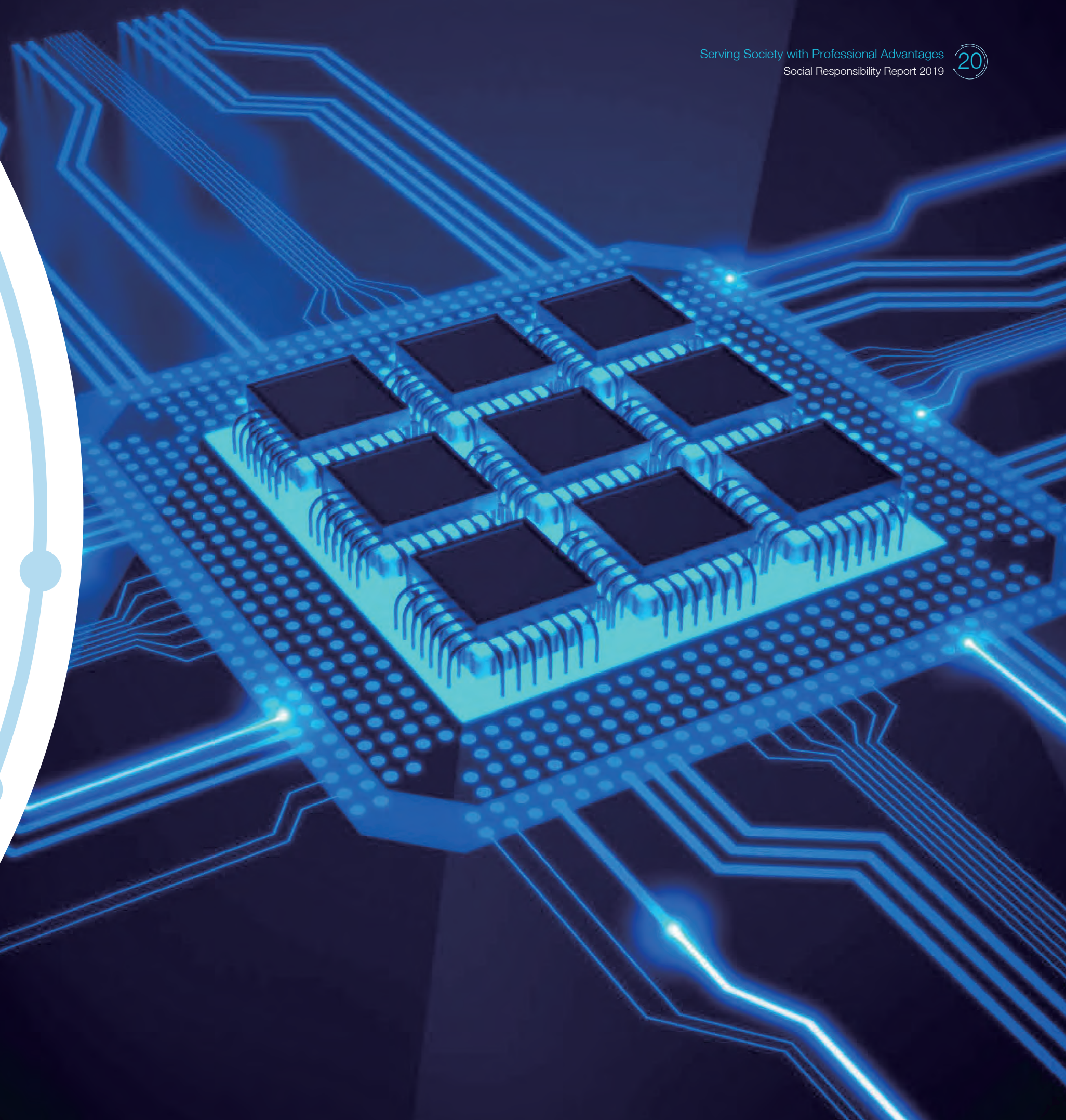
The identification and engagement of stakeholders are the basis and prerequisite for the Company to carry out social responsibility management and practice. Stakeholder engagement facilitates us to further understand the impact of our operation and service on economy, environment and society. At the same time, listening to and responding to the needs of stakeholders also helps us to forge closer cooperation with stakeholders and contribute to sustainable development.

Stakeholders	Expectations and Demands	Communication Approaches	Response and Measures
Shareholders and investors	<ul style="list-style-type: none"> Return on investment Knowing the Company's operations 	<ul style="list-style-type: none"> Shareholders' meeting Regular reports SSE E-interactive Visitor survey 	<ul style="list-style-type: none"> Timely and accurate disclosure of operations and major issues Following the basic principles of responsible management Sustainable returns to shareholders and paying cash dividends
The Government	<ul style="list-style-type: none"> Law-abiding operation Paying taxes according to law Promoting employment Implementing government policies Energy conservation Resources saving Ecological protection 	<ul style="list-style-type: none"> Accepting supervision Information reporting Working meeting Government-enterprise cooperation 	<ul style="list-style-type: none"> Abiding by laws, regulations and policies Paying taxes Providing jobs Responding to the national strategies Improving environmental management Targeted poverty alleviation
Customers	<ul style="list-style-type: none"> Quality products and services Knowing the product and service content 	<ul style="list-style-type: none"> Customer satisfaction survey Customer service call center 	<ul style="list-style-type: none"> Providing safe, convenient and quality products and services Continuously improving customer satisfaction Continuous R&D investment Improving customer communication channels Product and service description
Employees	<ul style="list-style-type: none"> Protecting employees' rights and interests Good welfare and development opportunities A healthy and safe working environment Enjoying the democratic rights of participation 	<ul style="list-style-type: none"> Labor Union Employee Representative Congress Employee suggestion box 	<ul style="list-style-type: none"> Signing a collective contract Smooth employee promotion channel Safety and health management Regular Employee Representative Congress
Suppliers	<ul style="list-style-type: none"> Win-win cooperation Open and fair principle Keeping commitments 	<ul style="list-style-type: none"> High-level meeting Supplier Conference Questionnaires 	<ul style="list-style-type: none"> Public procurement information, fair procurement Honoring all contracts
Communities	<ul style="list-style-type: none"> Supporting social welfare Creating employment opportunities for the community 	<ul style="list-style-type: none"> Volunteer platform 	<ul style="list-style-type: none"> Carrying out public welfare and volunteer activities
The Industry	<ul style="list-style-type: none"> Fair competition Promoting industry progress 	<ul style="list-style-type: none"> Peer cooperation University-enterprise cooperation 	<ul style="list-style-type: none"> Participating in industrial activities Improving R&D capability

Keeping Up with the Trend: Serving Society with Professional Advantages

It is an effective way to realize the sustainable development of an enterprise and the society to solve social problems by strengthening its core business ability. Thus, NPEC keeps innovating, and combines its own professional advantages with social needs to gather its superior resources to develop three core businesses of intelligent manufacturing, smart city, electronics manufacturing, with an aim to satisfy the people's increasing needs for a better life, and contribute to the high-quality economic and social development.

PANDA 能裕



Intelligent Manufacturing

Global manufacturing is shifting rapidly from the era of automation to the era of digitalization, information and intelligence. Intelligent manufacturing is the key to high-quality economic development and especially the transformation of high-quality development of manufacturing. NPEC closely follows the national policy guidance, continuously increases independent R&D and innovation input, and steadily promotes the development of intelligent manufacturing industry. We accelerate the development of industrial robot series products and the operation and maintenance platform systems while actively expanding to new business areas such as aerospace, glass, shoemaking, and new energy materials. In 2019, the Electronic Equipment Company successfully developed a 70kg/2.0m compact multi-purpose industrial robot, launched the Panda robot operation and maintenance management cloud platform, actively promoted the construction of China's first intelligent manufacturing factory of unmanned aerial vehicles, and won the bid for the first G8.5 liquid crystal glass production line independently developed in China and put it into production.

Driven by technological innovation and the new generation of information technology, we have broken the technological monopoly of high-generation LCD panel and glass production line transmission system in the field of intelligent manufacturing, and have mastered the ability to develop new display production line equipment systems.

Intelligent manufacturing for core equipment

System integration services of smart factory

Through independent and cooperative R&D, we built the industrial Robots Platform, the "iMANUF" Intelligent Manufacturing Platform, the Artificial Intelligence Platform and the Cloud Computing / Industrial Big Data Platform to facilitate customers to achieve their dream of "smart factory"

Key businesses in the intelligent manufacturing sector



The robot automatic spraying line project of Wager Electronics Co., Ltd, a subsidiary of Electronics Manufacturing Company, has completed the production line transformation and officially entered the commissioning stage, marking the unmanned, networked and intelligent spraying production

Panda Equipment R&D Center successfully develops a service robot cloud management platform system

In order to keep up with the development trend of the industry, the Electronic Equipment Company successfully developed a service robot cloud management platform system that can perform status monitoring, maintenance, remote upgrading, alarm management, log management and other functions. The platform helps improve the remote management of service robots and enables maintenance personnel to quickly and accurately know the robot's operating conditions and fully grasp the robot's operation parameters so that they can locate faults in time and make corresponding decisions and treatments.

Smart city

Pursuing independent innovation, NPEC has stepped up our transition to a software and hardware system service integrator and general contractor. We focus on smart transportation, smart buildings, safe cities, and broadcasting & television information network and aim to provide system solutions and terminals for urban modernization. With information technologies such as the new-generation Internet of Things (IoT), cloud computing and big data, we have connected buildings, public transportation and home life, making cities smarter and life better.

In 2019, the Information Industry Company focused on achieving key technological breakthroughs in areas such as mobile payment gate passing, artificial intelligence security identification, LTE/Tetra dual-mode train dispatching, and rail transit wireless cluster communication control management. The Communications Technology Company completed the development of three civilian Ku satellite terminal products and dual-mode dedicated video gateway products. In 2019, we won 6 new bids for rail transit AFC and communication projects, and 38 smart building projects.



The first network command center (NCC) project undertaken by the Information Industry Company marks that the rail transit industry has made solid strides from the traditional AFC system, ACC system and communication system towards the NCC system based on big data platform and expanded new product categories.



In March 2019, NPEC and Shenzhen Sed Industry Co., Ltd. signed the *Strategic Cooperative Framework Agreement between Sed and NPEC* to carry out in-depth cooperation on products, solutions and projects relying on technology accumulation and advantages in the field of rail transportation, so as to form a strong alliance to build a smart city hand in hand.

Performance optimization and technological innovation bring new travel experience

After 18 months of hard work, the AFC project of the first and second phases of the Chengdu Metro Line 5 undertaken by the Information Industry Company was successfully opened to traffic on December 27. The project involved R&D and design, equipment supply, debugging, testing, training and other related work. More than 2,000 ticket vending machines were installed at 41 stations, setting a new record of most single-line ticket vending machines built by the Information Industry Company. As many as 13 types of ticketing machine were used in this project, topping the industry across the nation in terms of equipment variety.

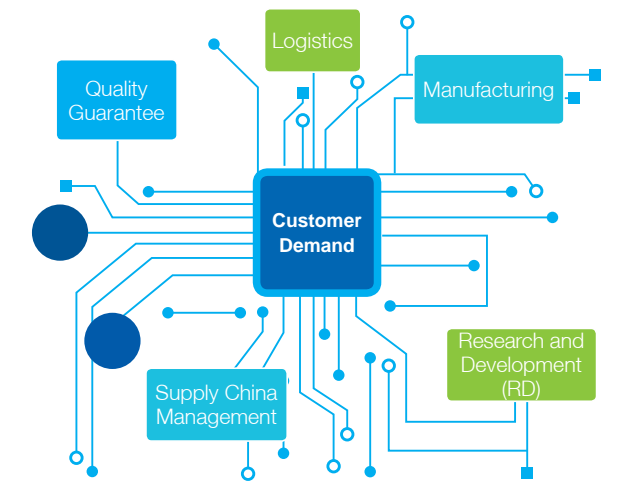
The Information Industry Company has maintained technical exchanges with relevant departments of Chengdu Metro since the project and formed a technical team to carry out performance optimization and technological innovation of traditional AFC equipment. On the one hand, for the first time, a self-service ticket processing terminal is set up beside the turnstile, which is convenient for passengers to do simple ticket handling by themselves. On the other hand, in order to alleviate the pressure of transfer passengers in the morning and evening peak hours and reduce the flow limit and the queuing time, the company provided mobile turnstiles for each station and each metro line for the first time, which can be flexibly installed at the entrance and exit of the non-paying area of a station, as a supplement to passenger ticket check-in and check-out during peak hours, bringing true convenience to passengers.



⚡ In November 2019, the Information Industry Company and China UnionPay launched the UnionPay Cloud Quickpass APP for passing the turnstiles by scanning QR code, which further enriched the diversified payment methods of rail transit travel scenarios for Nanjing citizens. As of the end of 2019, 3,405 turnstiles at 174 stations of all 11 metro lines of Nanjing realized the use of Alipay QR code and UnionPay NFC Quickpass.

Electronic Manufacturing Services

NPEC has always been actively adhering to the strategy of innovation-driven development and strives to promote industrial transformation and upgrading. We actively develop green and high-end electronics manufacturing service to cover the whole process, including R&D, procurement, materials management, production/manufacturing, testing and assembly, quality guarantee and warehouse exit of electronic products, and develop the complete electronics manufacturing industry chain. The electronics manufacturing industry is stepping up the transition to component assemblies. According to the market positioning of the two major business segments of SMT and injection molding, we give full play to the advantages of industrial synergy, expand from the field of brown goods to the fields of white goods and automotive electronics, and create new business models to boost market competitiveness.



⚡ The Electronics Manufacturing Service (EMS) System

In 2019, the Electronics Manufacturing Company completed the R&D and industrial application of ultra-high refresh rate 4K and 2K LCD logic controllers and integrated TCON products; it cooperated with customers to complete the development of human-computer interaction system display and control assemblies, and developed analog power supplies and control boards for passenger car controllers to meet customer needs. Nanjing Huage Electric Plastic Co., Ltd. under the Electronics Manufacturing Company successfully passed the annual review of IATF 16949: 2016 International Automotive Quality Management System.



⚡ Since 2018, we have invested in the establishment of an independent, intelligent, integrated automotive electronics factory, realizing full-process production from SMT, assembly, testing, packaging to shipment. The automotive audiovisual entertainment modular products produced there can be directly delivered to the OEMs. By the end of 2019, a total of 130,000 automotive audiovisual entertainment modular products have been produced.

Making Joint Efforts: Cooperating With Stakeholders for More Values

NPEC is committed to establishing good relationships with stakeholders, including customers, employees, environment, industry and community for co-existence and mutual prosperity. We continue to enhance the comprehensive communication and positive interaction between the Company and all parties, and through CSR fulfillment, we have received extensive support from all parties and also promoted the sustainable corporate and social development.

PANDA 熊猫



Improving Customer Experience

Customer satisfaction is our ultimate goal. Committed to providing quality service experience for customers, NPEC has continuously strengthened product quality management, customer service management and brand management, and provided innovative products, reliable quality and quality service to improve customer satisfaction.



Strengthening Quality Management

Based on the quality principles of "technology leading, scientific management, quality upmost, customers first", NPEC has formulated the Quality Management Regulations and established the ISO 9001 Quality Management System covering all subsidiaries to effectively improve the Company's quality management.



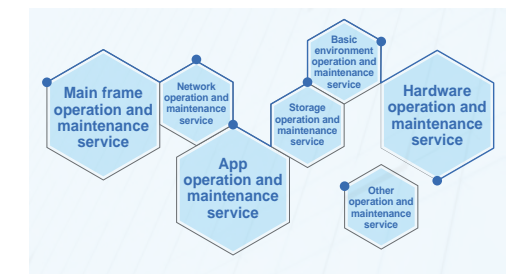
▲ NPEC product quality management system

Key Performance:

- Product qualification rate: The comprehensive rate of industrial automation equipment products was **100%**; the system integration service project delivery qualification rate was **100%**.
- The "(Ruins) Intelligent System Engineering Section One of Jinling Grand Bao'en Temple Ruins and Supporting Construction Project" undertaken by the Information Industry Company won the 2018 "Yangtze Cup" Quality Engineering Award of Jiangsu Province.
- Ninggao Intercity Communication System Project won the "Jinling Cup" Quality Engineering Award.

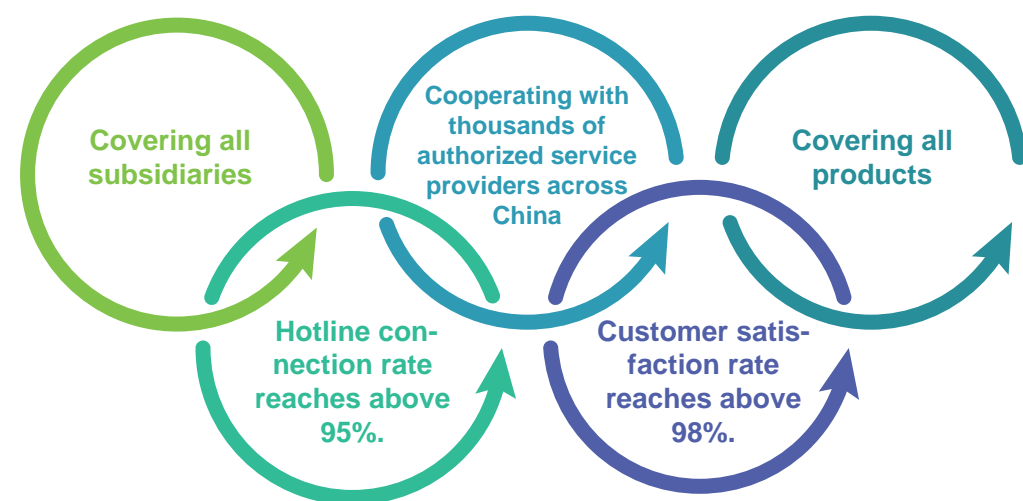
Information service with guaranteed quality

The service business scope of the Information Industry Company covers automatic ticket checking and vending system, communication system and building intelligent system. In order to provide better customer service, the company uses software development capabilities to develop a service management system. By using the existing "private cloud" platform, it integrated services such as equipment management, resource management, configuration management, data management, monitoring management, fault management, business scheduling, process management, and authority management, which also expanded the operation and maintenance service business and helped improving the technical content and professional level of services, thus providing customers with better service experience.

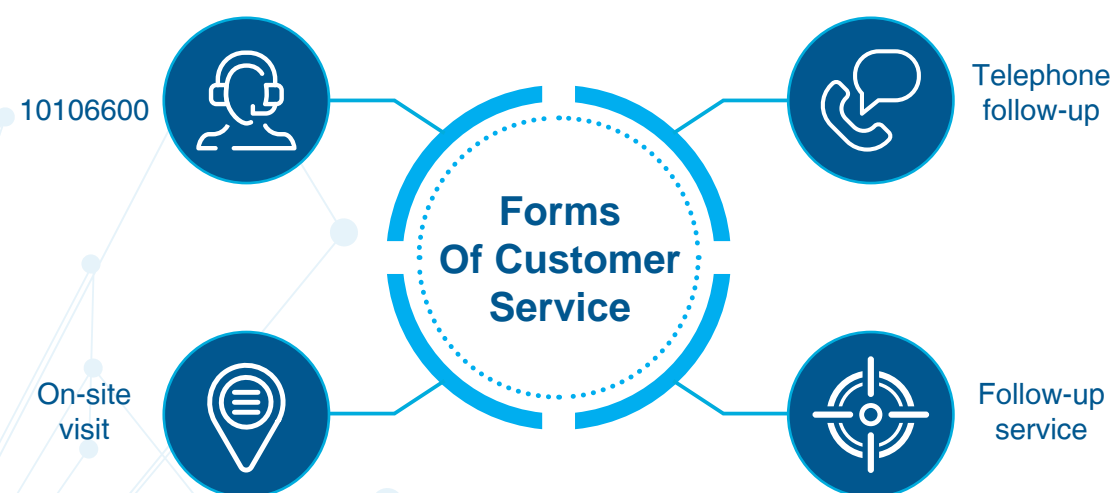


Improving Customer Satisfaction

NPEC has continuously enhanced its service awareness, established the Customer Relationship Management System (CRM System) and set up the Customer Relationship Committee as the top decision-making organization for customer service. We provide diverse channels for complaints and service applications, including 24-hour hotline service, the Company's website, e-mail, other websites and the media. At the same time, we have conducted customer satisfaction surveys and analysis to make improvements based on customer opinions.



▲ The Service Coverage Of Customer Service Call Center



To protect customers' rights and interests is an important corporate responsibility. NPEC, strictly abiding by relevant laws and regulations such as the Law of the People's Republic of China on the Protection of Consumer Rights and Interests, implements product warranty services of repair, replacement and refund and gives quickly response to various needs of customers. In addition, the Company has developed Business Secrets Protection Regulations to provide strict and full protection of customer privacy.



All customer requirements and service processes of the Customer Service Call Center are handled in the service system with strict permissions.



All customer service staff are prohibited from bringing electronic devices such as mobile phones into the workplace and should hand in them to special management personnel prior to work to prevent customer information from being photographed or transcribed.



The service provided by the Customer Service Call Center staff have whole-process audio recordings and the recordings only can be assessed by the supervisor designated by the center after submitting applications to the leader of the center.

Strict measures formulated by the Customer Service Call Center to ensure customers' data security



Strengthening Brand Promotion

Brand promotion is an important channel for NPEC to communicate with external stakeholders. We cooperate with various traditional media, emerging media, and e-commerce websites every year, and attend various industry activities such as exhibitions. We have edited and published the Electronic Worker's News to constantly promote it as the main publicity platform, and enhance the brand confidence of NPEC. Our product competitiveness and brand influence have been raised through extensive publicity in all sectors of society.



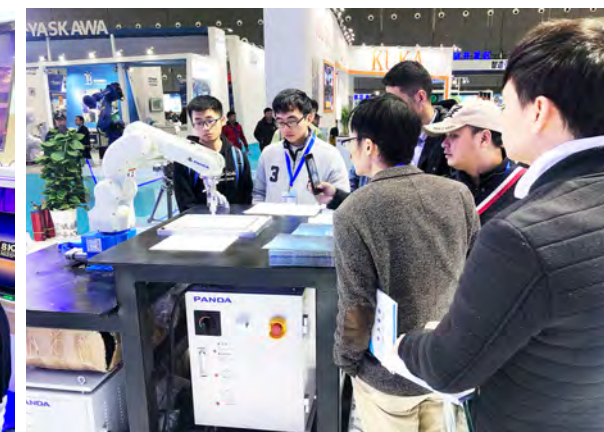
Brand promotion activities in 2019



NPEC attends China International Industry Fair



NPEC attends the world's largest electronic products trade fair



NPEC's "soul painter" robot and service robots displayed at the World Intelligent Manufacturing Conference

Key Performance:

- In 2019, NPEC brand was awarded **the Internationally Recognized Brand with Major Support from Jiangsu Province.**

Facilitating Employee Growth

Talent is a core element for an enterprise' s development. NPEC respects the expectations and appeals of employees, protects their rights and benefits as well as motivate and cultivates employees. The Company also cares for employees' physical and mental health and creates a harmonious working environment, with an aim to realize common development of employees and the Company.



Rights and Wellbeing

NPEC attaches great importance to building a harmonious labor relationship. In strict accordance with laws and regulations in China, such as the Labor Law of the People' s Republic of China, the Labor Contract Law of the People' s Republic of China, and the Labor Contract Regulations of Jiangsu Province, we have formulated the NPEC Management Document to protect employees' legitimate rights and interests through standardized management. Following the principles of fairness, transparency and openness in employment, we have signed labor contracts with our employees based on equality, voluntariness and unanimity through consultation.

The Company strictly abides by the laws and regulations in China, such as the *Law of the People' s Republic of China on the Protection of Disabled Persons*, the *Labor Law of the People' s Republic of China*, *Special Provisions on Labor Protection of Female Workers in Jiangsu Province*, and *Regulations on Population and Family Planning of Jiangsu Province*, and creates a diverse, fair and just working environment to avoid differentiated treatment of employees due to various factors such as religion, gender, age, and disability.

Constitute		2017	2018	2019
Gender	Female	1,420	1,183	1,087
	Male	2,411	2,324	2,369
Employment types	Senior Management	10	8	10
	Middle Management	150	139	139
	Primary-level Employees	3,671	3,360	3,307
Age	30 years old and below	1,092	999	1,112
	31-40 years old	1,160	1,063	913
	41-50 years old	1,135	1,038	797
	51 years old and above	444	407	634

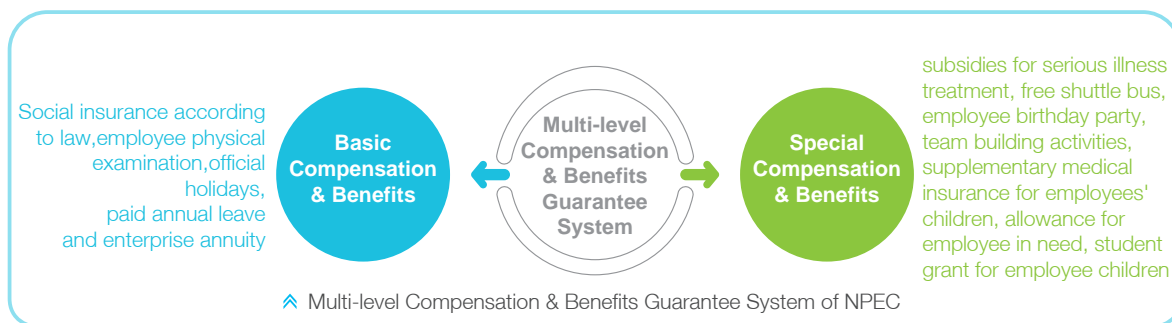
^ Gender distribution of employees、Employment types and Age distribution (Unit: person)

Employee turnover rate		2017	2018	2019
Gender	Female	1.03	1.96	8.74
	Male	1.89	9.4	6.67
Employment types	Senior Management	0	0	0
	Middle Management	0	0	0.72
	Primary-level Employees	2.45	10.36	7.62
Age	30 years old and below	1.91	7.83	18.01
	31-40 years old	1.18	2.45	4.01
	41-50 years old	0.16	0.078	3.24
	51 years old and above	0.06	0	3.39

^ Employee turnover rate-Gender distribution of employees、Employment types and Age distribution(Unit: %)

○ Improving the welfare guarantee

In compliance with the relevant documents such as the Interim Provisions on Wage Payment, Regulations of Jiangsu Province on Wage Payment, and the NPEC Management Document, we have provided employees with competitive compensation and benefits, further improved the compensation system and the salary increase mechanism and actively implemented the salary increase mechanism. Also, we have paid social insurance for employees in strict accordance with national policies to ensure that employees fully enjoy social security benefits. Complying with laws and regulations such as the Measures on National Annual Leaves and Memorial Days, the Implementation Measures for Paid Annual Leave for Employees of Enterprises, and the Special Provisions on Labor Protection of Female Workers in Jiangsu Province, we have protected employees' right to rest, and provided benefits with company features to employees based on actual conditions. In addition, the Company has revised the annuity implementation rules in accordance with the new national annuity policy and actively promoted the expensing and withholding of enterprise annuities after the annuity implementation rules were revised in accordance with the revised national annuity-related policies.



To improve employees' life quality, the Company has established canteens, clinics, activity rooms, supermarkets, baby care rooms, reading rooms, gymnasiums and other service venues in all industrial parks to continuously improve the welfare benefits of employees, so that all staff can fully feel the care and warmth of the "NPEC Family".

The Company pays close attention to the work and life needs of employees in special positions and actively carries out caring activities such as festival visits, special subsidies and assistance allowance. NPEC Labor Union visits retired employees, on-duty employees during the Spring Festival, annual advanced employees and non-local employees, and front-line production employees during high-temperature days and provides sympathy gifts for them annually. In March 2019, the Company held its 17th "Love Aid Fund" raising activity in Panda Electronic Equipment Industrial Park. A total of RMB 737,000 from individuals and companies was received, reaching a new high for eight consecutive years.



▲ NPEC leaders visit front-line employees during high-temperature days.



▲ On the eve of the Spring Festival of 2019, Xia Dechuan, Song Yunfeng, Yi Guofu and other NPEC leaders paid a visit to employees and Party members in difficulties and widows of former leaders.

Key Performance:

- Labor contract signing coverage **100%**
- Health examination coverage **100%**
- Total wages of NPEC increased by **7.77%** year on year
- In 2019, NPEC visited **292** employees in need.
- More than RMB **1.6** million of sympathy money, grants and caring allowance were distributed in 2019.

○ Democratic communication

NPEC has formulated systems such as the Democratic Management Regulations established the NPEC Labor Union and the system of employee representative congress. In order to promote democratic management, the Company has expanded democratic communication channels and established a working mechanism for employee representative inspections, thus protecting employees' rights to know, participate, express and oversee. In addition, we have also formulated relevant systems such as the Management Measures for Employee Representative Proposals, and collect extensive opinions of grass-roots employees in a timely manner through various channels, such as, Party congresses at all levels, employee representative congress, congress of labor union members, democratic life meetings for leaders, and regular organization activities.



▲ NPEC listens to the opinions and suggestions of the boarding staff.

Key Performance:

- In 2019, the average income of on-the-job employees increased by **8%** year on year, achieving the goals stipulated in the *Collective Wage Contract*.

Training and Development

As excellent talents are the most valuable resources for corporate development, NPEC values employee cultivation. Upholding the training concepts of all employees, full processes, all dimensions and multiple channels, NPEC has proactively cultivated a group of knowledge-based, skill-based, innovation-based and interdisciplinary talents in National Highly Skilled Talents Training Base and National Worker Educational Training Demonstration Site to further improve employees' skills and occupational quality and serve the industrial development, which facilitates building a "community of common destiny" for the coordinated development of NPEC and our employees.

○ Improving talents recruitment system

With the rapid development of NPEC in advanced industries such as intelligent manufacturing, we have seen stronger demand for talents. In order to pool more industry elites and improve the quality of talent introduction, in 2019, we unified the image of recruitment, and established a full-cover online recruitment channel centering on the graduates and social personnel recruitment on Zhaopin.com (medium and low-end social talents) and Liepin.com (medium and high-end social talents). In addition, we have further strengthened university-enterprise cooperation by signing cooperation and internship & practice base agreements with Chongqing Jiaotong University, Nanjing Institute of Technology and other colleges and universities, which helped sending recruitment information and promotional materials directly to graduates.



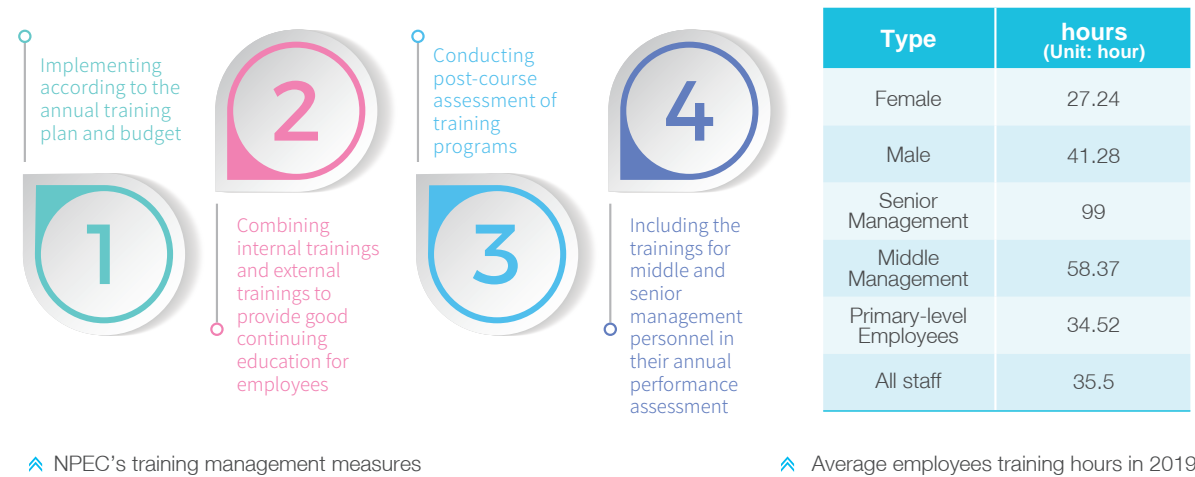
▲ 2019 NPEC new employee orientation

Key Performance:

- In 2019, NPEC organized and participated in more than **38** job fairs and recruited **203** new employees. Among them, **131** had a bachelor's degree or higher, **27** had a master's degree, and **41.2%** of new graduates are from "double first-class" colleges and universities or studied "double first-class" majors.

○ Developing talented personnel

According to the industrial development plan, NPEC has formulated and improved the 2019-2021 Talent Development Plan, which clarified the goals and guarantee measures for developing talented personnel. At the same time, the Company has identified key training areas and improved various talent training management measures.



▲ NPEC conducts preliminary review and comprehensive review of papers written in the electronic skills level recognition training



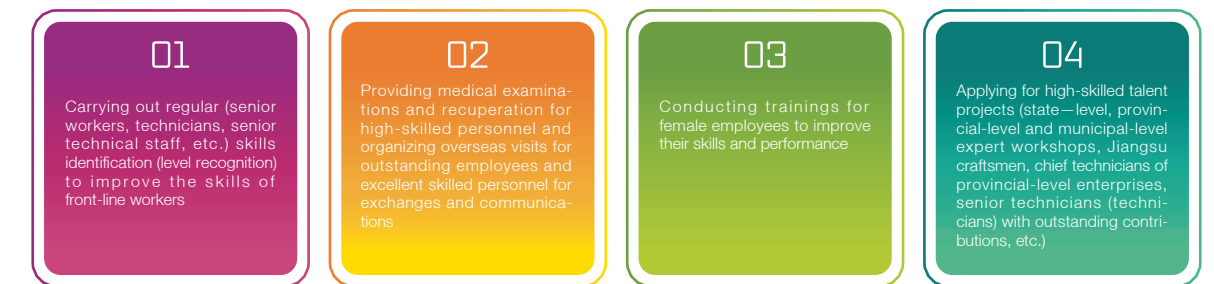
▲ The Electronic Manufacturing Company carries out training courses to strengthen the cultivation of young backbone personnel.

Key Performance In 2019:

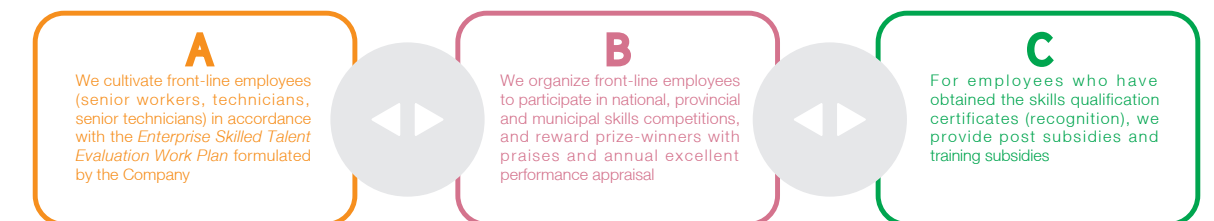
- We held **542** training sessions of various kinds, with more than **9,000** participants.
- We cultivated **1** new doctor in 2019, employed **15** employees of the professional titles, **29** employees of middle-rank professional titles, **123** employees of junior professional title, **9** new senior workers, **32** technicians, and **10** senior technicians.
- The coverage rate of employee training in 2019 was **99.68%**.

○ Strengthening the training of skilled personnel

NPEC pays attention to building a skilled talent team, and strives to cultivate a group of knowledge-based, skill-based, and innovation-based talents. We encourage employees to establish innovation concepts and thus have set up innovation application & reporting channels, such as the NPEC Labor Union and the Science and Technology Association. Meanwhile, we have also continuously improved the technological innovation rewarding mechanism to promote the transformation of scientific research results. What's more, we carry out or participate in various drills, skill trainings and competitions annually and have conducted the technical expert evaluation for the first time, endeavoring to create a corporate atmosphere that respects skills and skilled personnel.



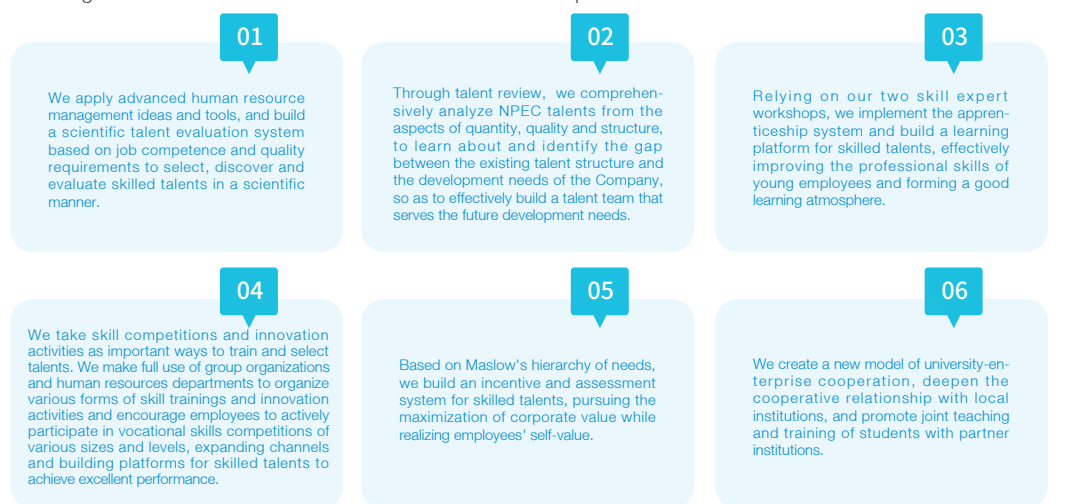
▲ NPEC's policies on improving employees' knowledge and skills in fulfilling job responsibilities



▲ NPEC's employee skill improvement program and transition assistance program

Skilled Talent Cultivation of Manufacturing State-owned Enterprises Based on Post Capability and Performance wins the Second Prize of the 2018 CEC Enterprise Management Innovation Achievement

The Skilled Talent Cultivation of Manufacturing State-owned Enterprises Based on Post Capability and Performance of the Electronics Manufacturing Company won the second prize of the 2018 CEC Enterprise Management Innovation Achievement for its six innovative practices in the cultivation of skilled talents.



▲ Six innovative practices



▲ The "screen printing machine installation and debugging" labor skills competition held by NPEC



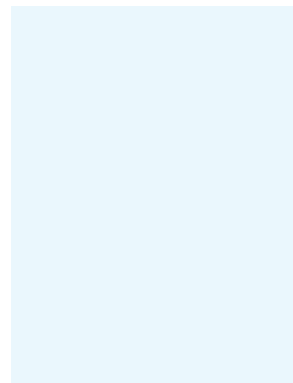
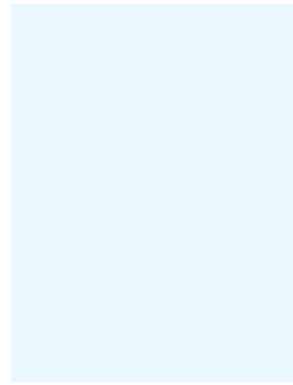
▲ The staff skill competition held by the Electronic Equipment Company



▲ NPEC employees Luo Xiang, Ma Zhengqiang, and Yang Yang participate in the third National Industrial Robot Technology Application Skill Competition and win the first, second, and third prize of the staff group respectively.



▲ Four NPEC employees award the title of National Technical Expert in the China Skills Competition in 2019



Key Performance:

- 1 State-level Technical Expert Workshop in 2019
- In 2019, we carried out various staff skill training and skill competition for 68 sessions with over 2,600 participants.
- In 2019, we completed the review of 7 senior technical experts from D5 companies or higher and the review and approval of 18 D6 technical experts.
- In 2019, a total of 26 skilled talents participated in various skill competitions and won awards.
- In 2019, we had 1 new state-level expert workshop leader, 5 national technical experts, 1 central SOE technical expert, and recommended 1 employee to receive the title of Great Master of Jiangsu.

Occupational Health and Safety

NPEC pays much importance to employees' occupational health and safety. The headquarters and 6 subsidiaries have passed the on-site external quality, environment, and occupational health and safety management audits, and upgraded the three major management systems successfully. By strengthening the construction of personnel, supply, technology, and institution defenses, we have safeguarded employees' personal and property security. In 2019, a total of 15 safety emergency drills of various types and 3 special meetings on work safety were organized. Various work safety trainings involved more than 2,000 participants and 62 work safety inspections of key areas and projects were conducted. No major safety incidents happened throughout the year.



▲ The work conference on fire safety held by NPEC



▲ The firefighting drill carried out by the Information Industry Company



▲ The safety promotion activity organized by Panda XinXing Industrial



▲ The CPR health knowledge training launched by the Information Industry Company

Key Performance:

- In 2019, we invested RMB 12.031 million in work safety and conducted safety trainings covering 5,756 participants.
- NPEC was recognized as Nanjing Safe Enterprise.

Creating a Harmonious Working Environment

NPEC is devoted to creating a harmonious “NPEC home” for our employees and continues to advocate the growth of female employees. The Company also conducts colorful activities to advocate the happy work and life.

○ Caring for female employees

The Company cares about female employees and protects their legitimate rights and interests as well as special career development needs. In addition, the Company holds special activities and build platforms for them to bring out their beauty.

A Career development needs
Every year, we select and commend the “Women Model Post” and “Women Model” of the previous year.

B Special needs of lactating female employees
We extend the breastfeeding leave within an appropriate range based on the national statutory leave, and set Baby Care Room to facilitate breastfeeding women at work.

C Special activities for female employees
We hold the Beauty Salon every year on Women’ s Day.

⚡ NPEC’ s measures to care for female employees



⚡ The dumplings activity held by the Electronics Technology Development Company to celebrate International Women’ s Day

○ Enriching employee spare-time life

NPEC attaches great importance to the cultural needs of employees under the new situation and has organized many cultural and entertainment activities. Employees are encouraged to participate in these activities, creating an atmosphere of harmony and unity.

Diversified employee activities	Sports	employee sports meeting, mountaineering, hiking, basketball game, badminton game etc.
	Hobbies	book sharing, speech contests, baking, etc.
	Themed performances	Spring Festival Gala, Mid-Autumn Festival Gala, the party to celebrate the 70th founding anniversary of the PRC, etc.



⚡ The sixth “General and Workers” table tennis friendly match hosted by NPEC



⚡ Employee spring climbing activity



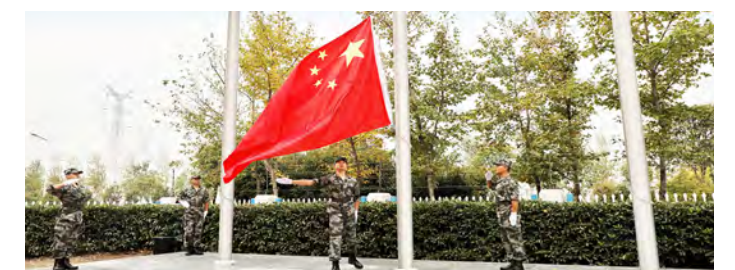
⚡ The book sharing activity held by the Electronic Equipment Company



⚡ A speech contest organized by NPEC to commemorate the 100th anniversary of the May 4th Movement



⚡ New employee physical education and training



⚡ A series of activities held by NPEC to celebrate the 70th founding anniversary of the PRC

Protecting Natural Environment

NPEC actively practices the philosophy that lucid waters and lush mountains are invaluable assets, incorporates green development into our businesses, and fulfils the responsibility of environmental protection. We have established an environmental management system, continuously promoted low-carbon practices, emission reduction and the sustainable use of resources, and cultivated environmental awareness to realize the harmonious coexistence between the Company and the ecological environment.



- In 2019, the Company conducted **9** environmental self-inspections.,

no major environmental incidents happened throughout the year.

- In 2019, RMB **1.97** million was invested in environmental protection.

Environment Management System

NPEC strictly abides by national and local laws related to environmental management, including the Environmental Protection Law, Environmental Protection Tax Law, Regulations on Air Pollution Prevention and Control in Jiangsu Province, and follows the principles of energy conservation, emission and pollution reduction, and protection of the earth environment. The Company has formulated the Quality, Environment and Occupational Health & Safety Manual based on the guidance of standards such as the ISO 14001 Environment Management System Requirements and Application Guide to promote better environmental management system, thus laying a solid foundation for green development.

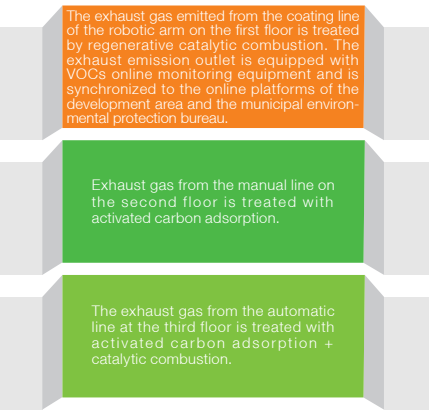
We have fully identified the environmental factors related to production, R&D, products, services, office work and other business operations, and formulated a targeted plan for effective management and control. In addition, we have developed the Identification and Evaluation Procedures of Environmental Factors and Identification and Evaluation Procedures of Hazard Sources. We also identify and document important environmental factors and medium or higher sources of hazards during business operation, and then inform departments at all levels and functions timely and accurately.

Low Carbon Emission Reduction

NPEC reduces the carbon footprint of products and operations process and its negative impact on the environment by developing green products and improving energy efficiency, which contributes to coping with global climate change.

Emission reduction

Reducing greenhouse gas emissions can effectively mitigate climate change, and NPEC has been taking actions. NPEC divides greenhouse gas emissions into two categories for the sake of calculation. The Category I refers to direct emissions of greenhouse gases generated by NPEC-owned or NPEC-controlled businesses, including emissions from natural gas, diesel and gasoline, etc.; Category II refers to indirect emissions of greenhouse gases caused by externally purchased electricity.



Waste gas treatment in three paint lines of NPEC

Waste management

NPEC advocates green products, and during product design and R&D stages, fully considers the eco-friendly and recyclable performance of products, with an aim to reduce energy consumption and waste discharge, and improve resource utilization efficiency.

Type	2017	2018	2019
Paper	2.25	1.713	4.3
Kitchen Waste	36	34.6	1307
Plastics	0.0039	0.52	0.8
Metal	0.012	28.3	26.7
Wooden Products	53	2.7	1.35

Total non-hazardous waste (Unit: ton)

Type	2017	2018	2019
Paper	60.0	59.2	0.343448
Plastics	183.0	168	211.31
Metal	11.0	11.1	1.620

Total usage of packaging materials (Unit: ton)

Greenhouse gas emissions	2017	2018	2019
Category I: Direct emissions	1,123.13	439.00	1,629.03
Category II: Indirect emissions	15,682.49	12,880.76	32,830.06
Greenhouse gas emissions (Unit: tons of carbon dioxide equivalent)			
Category	2017	2018	2019
Nitrogen Oxides (NOx)	0.15687	0.09672	0.54584
Particulate Matter (PM)	0.01155	0.00784	0.04118
Exhaust emissions (Unit: tons)			

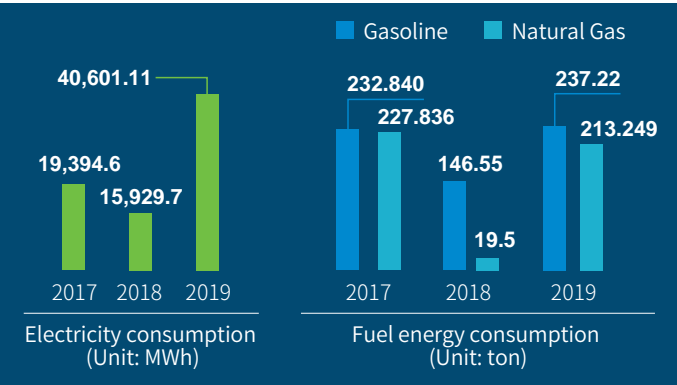
Waste type	Treatment methods			
Hazardous waste with no recovery value	Disposed by qualified third-party companies			
Hazardous waste with recovery value (e.g. solder splash)	Refined after recovery by the raw materials supplier			
Non-hazardous waste (e.g. kitchen waste)	Recycled by qualified third-party companies			
Solid waste with recovery value (e.g. packages, cardboards, paper boxes, plastic stools)	Recycled by the manufacturer or third-party companies			
Waste disposal methods				
Type	Unit	2017	2018	2019
Oil resistant gloves	Ton	0.6	0.66	0.027
Waste Chemical Paint	Ton	18	16.8	2
Waste toner cartridge (including waste toner)	Piece	399	357	169
Waste selenium drum	Piece	1,006	873	307
Electric waste such as waste battery	Kg	21	212.4	0.033
Waste fluorescent lamp	Kg	310	26.2	0.271
Total hazardous waste				

Sustainable Resource Utilization

NPEC promotes the resource saving as well as high efficiency and sustainable use in operation, and improves the utilization rate of clean energy to advocate the circular economy and green development among its subsidiaries.

Energy management

NPEC increases the utilization rate of raw and supplementary materials to save energy resources and to achieve efficient use of energy. The Company has formulated the Regulations on Energy Conservation Management to conduct centralized control of lighting and air conditioning. It also uses electric water boilers with the timer device, energy saving lighting in public areas such as the washing rooms and passageway in office buildings.



Water resource management

To practice sustainable water management, NPEC sets up one independent water meter in each washing room within the work areas for staged measurement and calculation, and uses sensor faucets naps to avoid water waste when forgetting turning off the faucet. Meanwhile, the Company has built sewage treatment stations within the industrial park to do sewage testing and treatment.

Type	2017	2018	2019
Water Consumption	181,054	217,240	278,259
Waste Water Discharge	162,949	195,500	241,872
Chemical Oxygen Demand (COD)	39.55	46.52	49.53
Water resource utilization (Unit: ton)			

Raising Environmental Awareness

NPEC actively advocates low-carbon and green life and organizes special trainings on environmental management to advocate employees to practice environmental protection in daily work and life and raise their environmental awareness.

Advocating green office

In terms of paper use, we advocate double-sided printing in daily office work and improve the OA system to realize online working and file transmission, thus reducing paper consumption. Besides, we advocate green lighting by turning off extra lighting.

Environmental protection campaigns in community

The Company has organized employees to carry out community-based environmental protection voluntary services for many years. In 2019, we carried out a number of environmental protection voluntary activities including the Environmental Protection Pioneering Initiative, Zijinshan garbage collection activity, Xuanwu Lake garbage collection activity, “jointly building a beautiful environment in Youshanyuan Community” activity, “Love Nanjing” city clearing activity, and Lishui voluntary planting activity.



NPEC young volunteers carry out the voluntary planting activity in Lishui.



The young volunteer service activities help clear all kinds of advertisements on the street of communities.

Supporting Industry Development

As an enterprise pursuing diversified development, we have many cooperation partners in upstream and downstream. To this end, we further strengthen the social responsibility management of suppliers, enhance exchange and cooperation with industrial partners, and promote the sustainable development of the industry with all stakeholders, in hope of achieving common development, growth and achievements with partners.

Responsible Procurement

We emphasize transparency in procurement and uphold the principle of open, just and transparent procurement. Thus we constantly improve the supplier appraisal and access mechanism and gradually implement responsible procurement.

1 The Departments of Procurement of our subsidiaries regularly carry out multi-dimensional appraisals of existing and new suppliers every year to realize the real-time management and comprehensive assessments of suppliers in terms of quality of materials or labor provided by them, company credit, operational situation, etc. According to the assessment results, a list of qualified suppliers is formed.

2 For key suppliers or suppliers of special materials, our relevant functional departments, such as the Department of Procurement, Department of Production, Department of Quality, and Department of Research and Development, have established the supplier assessment team to make on-site assessments of suppliers.

3 When risks occur in suppliers' products or services, we discuss the improvement plan with suppliers to help solve the problems

▲ Establishing an assessment mechanism to help suppliers detect and rectify problems

In addition to self-assessment and evaluation, we encourage all suppliers to pass the authoritative management certifications, including certification of quality and environment management systems. We propose more detailed requirements of social responsibility management for suppliers who provide key products or services. Moreover, we specify in the procurement contract that the raw materials provided by suppliers should meet relevant environmental requirements and we prioritize those with fewer environmental impacts.

In 2019, we selected **406** suppliers by using environmental and social standards.



Regional distribution of NPEC suppliers in 2019

Promoting Industry Development

We play a leading role in the supply chain, and also take the initiative to establish close cooperation with stakeholders such as industrial partners and scientific research institutes. We actively participate in the development of national and industry standards, exchange and cooperate with industrial partners and carry out industry-university-research cooperation, thus contributing to the development of Chinese electronics information industry.

○ Participation in preparing standards

NPEC has actively participated in or led the preparation of national and industrial standards, thus promoting the development of mobile communications and intelligent manufacturing in China.

○ Developing Industry-University-Research Cooperation

NPEC and our subsidiaries promote the industry-university-research collaboration with industrial partners and scientific academies. Giving full play to advantages in technology, resources and market, we have established cooperation relationships with dozens of national scientific academies, such as Nanjing University and Southeast University to solve multiple technical problems and cultivated a group of R&D personnel in the industry, achieving mutual complementarity and value creation and sharing. In 2019, we cooperated with 7 junior colleges, technical secondary schools, and research institutes.



▲ In July 2019, the United Front Work Department of the Nanjing Municipal Party Committee held a joint meeting of universities, research institutes, and enterprises in the Panda Electronic Equipment Industrial Park.



▲ The university-enterprise cooperation between NPEC and Jiang University of Science and Technology

○ Establishing partnership with industry peers

NPEC actively practices the idea of win-win cooperation and establishes good relationships with industry partners based on mutual trust. In 2019, the Company cooperated with enterprises and organizations such as Shenzhen Metro, China Civil Engineering Construction Corporation (CCECC), Ericsson, ZTE, China Huarong Jiangsu Branch, China Association for Public Companies, and the Research Group of the "Research on Development Strategy of New Generation Intelligent Manufacturing Industry in Jiangsu Province" project to carry out mutual visits and exchanges. Relying on the resources and technical advantages of all parties, we shared resource and achieved win-win cooperation while promoting the sustainable development of the industry. In 2019, we participated in 31 industry exchange activities and won the honorary title of "Excellent Member Unit of Nanjing Software Industry Association in 2018".



▲ Hu Xianwen, General Manager of Shenzhen Tairisheng Industrial Co., Ltd. leads a delegation to visit the Panda Electronic Equipment Industrial Park.



▲ Wang Jingtao, Chief Engineer of the National Administration of State Secrets Protection leads a delegation to visit the Panda Electronic Equipment Industrial Park for investigation and guidance.

Engaging in Community

NPEC pays attention to the management of our relationship with communities so as to create a good living environment for the Company. Based on the advantages of our main businesses, the Company carried out targeted poverty alleviation, engages in community welfare and encourages employees to actively participate in community volunteer activities, so as to better fulfill our social responsibility.

○ Targeted Poverty Alleviation

NPEC has actively responded to the national call for targeted poverty alleviation, earnestly implemented the requirements of the Action Plan of Nanjing to Get Rid of Poverty and Build a Well-off Society during the Thirteenth Five-Year Plan Period and the guiding principles of the Notice On the Implementation of the “10,000 Party Member officials Helping Ten Thousand Households” and “100 Enterprises Helping 100 Villages” Paired Assistance Activities to Promote Targeted Poverty Alleviation. The Company vigorously studied and formulated practical assistance plans for paired villages and has effectively implemented the poverty alleviation work of the paired villages by carrying out the “Autumn Semester Student Aid” activity and making donations to poor households. In 2019, RMB 84,913 was invested for targeted poverty alleviation.



Major measures of NPEC to secure the realization of poverty alleviation goals

○ Public Welfare in Community

NPEC is actively involved in community-based public welfare undertakings. In response to community needs, we have given full play to our advantages, encouraged employees to participate in community development, and helped communities to promote civilized urban development, as a way to fulfill corporate social responsibility of public welfare. In 2019, we incorporated employee volunteer management into the NPEC Grassroots Youth League Branch Work Credit Assessment Method, and organized a series of voluntary service activities in areas such as community landscaping, caring for vulnerable groups in the community, and serving community development.

NPEC fights the battle against the COVID-19 pandemic by donating supplies to Jiangsu Province Hospital

Since the COVID-19 outbreak, medical workers have become soldiers fighting on the front line of the pandemic, risking their lives to protect the health of the people. During the pandemic, face masks run into short supply, and highly protective medical masks instantly became the most needed anti-epidemic supplies for medical staff. As a listed company under the central state-owned enterprise, NPEC resolutely fulfilled our social responsibilities and paid close attention to the development of the pandemic and social needs. The Company donated a batch of anti-epidemic supplies to Jiangsu Province Hospital through multi-party planning, which was highly applauded by the hospital, contributing NPEC's efforts to win the fight against the pandemic.



10,000 European FFP2 medical masks imported from Russian donated to Jiangsu Province Hospital by NPEC.

Volunteering activities by NPEC employees in 2019



○ Caring for the vulnerable groups

Sending warmth to Yincheng community, visiting the home for the elderly in Wulao Village, “Love warms the winter • Spreading love” charity sale, Xue Leifeng book donation and charity sale, donating winter clothes for children in poor mountainous areas in Yunnan Province, etc.

○ Serving community development

“Travel with Mobile Payments” subway column, anti-drug Publicity in Huaihai New Village, providing oral examinations for community residents, providing community parenting and early childhood education Q&A, bringing home-made dishes to residents

NPEC volunteers clean up rubbish in community roads and green belts, and put shared bicycles in order in designated parking areas.

Key Performance:

In 2019, 290 employees provided 1,020 hours of volunteer services, involving 408 participants.

Appendixes

Content Index of ESG Reporting Guide

Environmental				
Aspect		Description	Corresponding report content	
Aspect A1: Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	●	P45-47
	A1.1	The types of emissions and respective emissions data.	● The data filling is more standardized, and the indicator results are different from those of previous years	P46-47
	A1.2	Greenhouse gas emissions in total (in tons) and, where appropriate, intensity(e.g. per unit of production volume, per facility).		P47
	A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity(e.g. per unit of production volume, per facility).	●	P47
	A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	●	P47
	A1.5	Description of measures to mitigate emissions and results achieved.	●	P47
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	●	P47
Aspect A2: Use of Resources	General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	●	P48
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in ' 000s) and intensity (e.g. per unit of production volume, per facility).	● The data filling is more standardized, and the indicator results are different from those of previous years	P48
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).		P48
	A2.3	Description of energy use efficiency initiatives and results achieved.	●	P48
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose. water efficiency initiatives and results achieved.	● No issue found in sourcing water	P48
	A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.	●	P47
Aspect A3: The Environment and Natural Resources	General Disclosure	Policies on minimizing the issuer's significant impact on the environment and natural resources.	●	P48
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them	●	P48

Social				
Aspect		Description	Corresponding report content	
Aspect B1 : Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	●	P33-36
	B1.1	Total workforce by gender, employment type, age group and geographical region.	○	P34
	B1.2	Employee turnover rate by gender, age group and geographical region.	○	P34
Aspect B2 : Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	●	P42
	B2.1	Number and rate of work-related fatalities.	○ No death caused by job-related accidents	—
	B2.2	Lost days due to work injury.	○ No data	—
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	○	P42
Aspect B3 : Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	●	P38-41
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	○	—
	B3.2	The average training hours completed per employee by gender and employee category.	○ No data	P40
Aspect B4 : Labor Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have	●	P34
	B4.1	Description of measures to review employment practices to avoid child and forced labor.	○ No violation happened during the reporting period, including child labor or forced labor.	P34
	B4.2	Description of steps taken to eliminate such practices when discovered.	○	—

Aspect B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain.	●	P49-50
	B5.1	Number of suppliers by geographical region.	○	P49-50
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	○	P49
Aspect B6: Product Responsibility	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	●	P27-32
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	○ No data	——
	B6.2	Number of products and service related complaints received and how they are dealt with.	○ No data	——
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	○	P12
	B6.4	Description of quality assurance process and recall procedures.	○ No data	——
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	○	P30
Aspect B7: Anti-corruption	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	●	P10-11
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	○ No data	——
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	○	P10-11
Aspect B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	●	P52-54
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	○	P53-54
	B8.2	Resources contributed (e.g.money or time) to the focus area.	○	P53-54

Note: ● means the indicators of “comply or explain” and ○ means the indicators of “suggest to disclose”.

Reader Feedback

Thank you for reading our Social Responsibility Report 2019. We expect to receive your feedback on our social responsibility performance and this report. Your suggestions and comments will help us continue to improve our corporate social responsibility management and practices and our next report. Please complete the form below and send it to us via mail or e-mail.

What is your overall impression of this report?

☐ Very good ☐ Good ☐ Average ☐ Very poor ☐ Poor

How is the structure of this report?

☐ Very good ☐ Good ☐ Average ☐ Very poor ☐ Poor

How about the readability of this report?

☐ Very good ☐ Good ☐ Average ☐ Very poor ☐ Poor

How is the disclosure of topics to your concern?

☐ Very comprehensive ☐ Comprehensive ☐ Partial related ☐ Few information
☐ No related information

What kind of additional information do you expect to see in the Report?

Is there any suggestion on our CSR performance or this report?

Contact information:

Tel: (86 25) 84801144

Fax: (86 25) 84820729

Email: dms@panda.cn

Address: No. 7 Jingtian Road, Nanjing, Jiangsu Province, the PRC



Nanjing Panda Electronics Company Limited

南京熊猫电子股份有限公司

www.panda.cn