



China Electronics

Huada Technology Company Limited

中國電子華大科技有限公司

(Incorporated in the Cayman Islands and continued in Bermuda with limited liability)

(於開曼群島註冊成立及於百慕達繼續經營之有限公司)

(Stock Code 股份代號: 00085)

CORPORATE SOCIAL RESPONSIBILITY REPORT 2022

企業社會責任報告

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Corporate Social Responsibility Report

企業社會責任報告

1. ABOUT THIS REPORT

This report is the Corporate Social Responsibility Report issued by China Electronics Huada Technology Company Limited (the "Company"). It addresses the actions taken by and the achievements of the Company and its subsidiaries (the "Group") in respect of sustainable development regarding economic, environment, and social issues. This report has been prepared with reference to the Environmental, Social and Governance Reporting Guide issued by The Stock Exchange of Hong Kong Limited.

1.1 Scope of the report

Organisational scope: the companies covered under this report included the Company, and its subsidiaries, CEC Huada Electronic Design Co., Ltd ("Huada Electronics"), Shanghai Huahong Integrated Circuit Co., Ltd and China Electronics Huada Technology (Shenzhen) Company Limited.

Reporting period: from 1 January 2022 to 31 December 2022.

1.2 Data

Data disclosed in this report were extracted from the Group's original records in day-to-day operation or financial reports.

1.3 Reliability assurance

The board of director of the Company (the "Board") guarantees the contents of this report do not contain any false information, misleading statement or material omission.

1.4 Reporting principles

- Principle of materiality. This report identifies and responds to material environmental, social and governance ("ESG") issues affecting the Group's sustainable development through an online survey of key stakeholders and data analysis. The process and results of the materiality analysis are detailed on pages 7 to 10 of this report.
- Principle of quantitative. The Group's ESG quantitative key performance indicators have been disclosed in this report and are detailed on page 19, 22, 25, 26, 30, 37 and 40 of this report.

1. 關於本報告

本報告是中國電子華大科技有限公司(「本公司」)發佈的企業社會責任報告，披露本公司及其附屬公司(「本集團」)在經濟、環境及社會的可持續發展方面採取的行動及達到的成效。本報告以香港聯合交易所有限公司發佈的《環境、社會及管治報告指引》為參考依據編製。

1.1 報告範圍

組織範圍：本報告涵蓋的公司包括本公司，以及其附屬公司北京中電華大電子設計有限責任公司(「華大電子」)、上海華虹集成電路有限責任公司和中電華大科技(深圳)有限公司。

報告期間：2022年1月1日至2022年12月31日。

1.2 數據

本報告中的數據來自本集團日常營運的原始記錄或財務報告。

1.3 可靠性保證

本公司董事會(「董事會」)對本報告的內容進行保證，不存在虛假資料、誤導性陳述或重大遺漏。

1.4 匯報原則

- 重要性原則。本報告通過重要利益相關方線上調查、數據分析等工作，識別出影響本集團可持續發展的重要環境、社會及管治(「ESG」)議題並回應。重要性分析過程及結果詳見本報告第7頁至第10頁。
- 量化原則。本報告已經披露本集團的ESG量化關鍵績效指標，詳見本報告第19頁、第22頁、第25頁、第26頁、第30頁、第37頁及第40頁。

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- Principle of consistency. The indicators used in this report are as consistent as possible from one reporting period to the next, and changes in the indicators are explained to reflect the changing trends in key performance.
- Principle of balance. This report reflects objective facts and discloses both positive and negative indicators.

2. ENVIRONMENTAL, SOCIAL AND GOVERNANCE MANAGEMENT STATEMENT FROM THE BOARD

2.1 Governance structure for environmental, social and governance

The Group has established a top-down governance structure for ESG issues with the Board assuming overall responsibility for ESG strategy and reporting of the Group, and established an ESG working group as the manager and coordinator of ESG work.

- *The Board*

The duties of the Board include:

- a) assessing and determining the risks and opportunities associated with the ESG issues of the Group;
- b) ensuring that appropriate and effective ESG risk management and internal control systems are in place;
- c) formulating the Group's ESG management approach, strategies, priorities and targets;
- d) reviewing the Group's performance against ESG targets on a regular basis; and
- e) approving the Corporate Social Responsibility Report of the Group.

- 一致性原則。本報告對不同報告期間所使用的指標盡量保持一致，對發生變化的指標進行解釋說明，以反映關鍵績效的變化趨勢。
- 平衡性原則。本報告反映客觀事實，同時披露正面和負面指標。

2. 董事會的環境、社會及管治管理聲明

2.1 環境、社會及管治的管治架構

本集團建立了自上而下的ESG議題管治架構，由董事會對本集團的ESG策略及匯報承擔全部責任，並成立ESG工作小組作為ESG工作的管理者與協調者。

- *董事會*

董事會的責任包括：

- a) 評估及釐定本集團的ESG議題的風險及機遇；
- b) 確保設有適當和有效的ESG風險管理及內部控制系統；
- c) 制定本集團的ESG管理方針、策略、優次及目標；
- d) 就ESG目標定期檢討本集團的表現；及
- e) 審批本集團的企業社會責任報告。

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• ESG working group

The ESG working group is responsible for the implementation of ESG tasks to all relevant departments. The duties of the ESG working group include:

- directing and reviewing the formulation of ESG management approach and strategies;
- monitoring the formulation and implementation of ESG targets and reviewing the progress of their achievement;
- directing and reviewing the identification and priorities of key ESG issues;
- preparing the annual Corporate Social Responsibility Report for the Board's review and approval;
- identifying ESG risks relevant to the Group annually and assessing the impact of such risks on the Group and making recommendations to the Board on the risk-counteracting strategies; and
- other duties as delegated by the Board.

2.2 Progress of ESG work

In 2022, the Group upheld the ESG vision of "Innovation empowers green practices, for a bright future" and continued to promote ESG management practices at all levels with due consideration of the Group's businesses and the demands of various key stakeholders, with specific progress as follows:

• Products and services

We insisted on research and development and innovation, continuously enhanced the Group's competitive advantage in the sector of smart cards and security chips and expanded the market share. We continued to participate in the formulation of national standards, industry standards and association standards, helped promote the standardisation of industry technology and passed the third batch of professional, refined, specialised and innovative "Little giant" enterprise accreditation organised by the Ministry of Industry and Information Technology of the People's Republic of China.

• ESG工作小組

ESG工作小組負責將ESG任務落實到各相關部門。ESG工作小組責任包括：

- 指導和檢討ESG管理方針及策略的制定；
- 監察ESG目標的制定和實施及檢討該等目標實現的進展；
- 指導和檢討重要ESG議題的識別和排序；
- 編製年度企業社會責任報告，並提交董事會審批；
- 每年識別與本集團有關的ESG風險及評估此類風險對本集團的影響，並就風險應對策略向董事會提供建議；及
- 董事會授予的其他責任。

2.2 ESG工作進展

2022年，本集團秉持「創新賦能綠色、美好未來」的ESG願景，在充分考慮本集團業務及各重要利益相關方訴求的基礎上，持續推進各層面的ESG管理實踐，具體進展如下：

• 產品及服務

堅持研發創新，不斷提升本集團在智能卡及安全芯片領域的競爭優勢及擴大市場佔有率；繼續參與國家標準、行業標準及團體標準的制定，協助推動行業技術的標準化；通過中華人民共和國工業和信息化部組織的第三批專精特新「小巨人」企業認定。

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• Employees

Through survey and research studies on the competitiveness of the Group's remuneration, comprehensively considered factors such as annual staff cost budget, annual staffing requirements, etc., we reasonably adjusted the salary levels of employees. We conducted training on production safety for employees, implemented a production safety responsibility system for all employees, and promptly organised vaccination of employees against COVID-19 to safeguard employees' health.

• Compliance operation

We conducted publicity activities on corruption-free practice and business ethics for directors, senior and middle management and employees, and continuously promoted the building of business ethics culture through various channels. We continuously promoted the environmental and social risks management of the supply chain to ensure the supplier's compliance operation, guaranteeing the quality of the Group's products and services.

• Environment

Through means such as improving the management system, raising awareness publicity and implementing daily management, we are actively responding to China's "Peak carbon dioxide emissions and carbon neutrality targets" and doing our best to reduce energy consumption during operations, complying with the principle of "Reduce, recycle, harmless" enshrined in the Prevention and Control of Environmental Pollution Caused by Solid Waste Law of the People's Republic of China to optimise the disposal method of waste and reduce environmental pollution through recycling.

• Community investment

We continued to participate in community welfare activities, support disadvantaged groups and assist village revitalisation.

• 員工

通過本集團的薪酬競爭力調研，綜合考慮年度人工成本預算、年度人員編制需求等因素，合理調整員工薪酬水平；組織員工開展安全生產培訓，落實安全生產全員責任制度；及時組織員工接種新冠疫苗，保障員工身體健康。

• 合規營運

向董事、中高層管理人員及員工開展廉潔執業及商業道德宣傳工作，通過多種渠道不斷推動商業道德文化建設。持續推進對供應鏈的環境及社會風險管理，確保供應商的合規營運，並保障本集團產品及服務的質量。

• 環境

通過完善管理制度、強化意識宣傳及落實日常管理等手段，積極響應中國「碳達峰、碳中和目標」，竭力減少營運過程中的能源消耗；遵守《中華人民共和國固體廢物污染環境防治法》的「減量化、資源化、無害化」原則，優化廢棄物的處置方式，通過循環使用減少環境污染。

• 社區投資

持續參與社會公益活動，資助弱勢群體及助力鄉村振興。

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3. CORPORATE SOCIAL RESPONSIBILITY MANAGEMENT

3.1 Corporate social responsibility philosophy

The Group is principally engaged in the business of design and sale of integrated circuit chips. The integrated circuit chips design operation comprises the design of smart cards and security chips and the development of application system.

The Group has all along been insisting on developing the information industry and safeguarding of information safety as its own responsibility. By adhering to the “Be innovative in electronics of China, lead the information in the future” responsibility philosophy, and incorporating it into the Group’s strategic and operational practice, the Group seeks to maximise the comprehensive benefits of economy, environment and society, and strives to realise the ESG vision of “Innovation empowers green practices, for a bright future”.

The Company has complied with the “Comply or explain” provisions set out in the Environmental, Social and Governance Reporting Guide as set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited for the year ended 31 December 2022. Details of the corporate governance practices of the Company are set out in the Company’s 2022 Annual Report.

3.2 Participation of stakeholders and analysis of key ESG issues

The communication with and the participation of stakeholders are important components of the sustainable development of enterprises. The Group operates principally in Mainland China. The key stakeholders of the Group includes its shareholders, customers, employees, government and regulatory authorities, business partners, communities and the public as well as the ecological environment. Through communication with its stakeholders, the Group understands their expectations and advices, so as to provide guidelines for the Group’s operational decision-making and make more positive contributions to sustain the industrial and social development.

3. 企業社會責任管理

3.1 企業社會責任理念

本集團的主要業務為從事集成電路芯片的設計及銷售。集成電路芯片設計業務涵蓋智能卡及安全芯片的設計及應用系統開發。

本集團始終堅持以發展信息產業及維護信息安全為己任，秉承「創新中國電子，引領信息未來」的責任理念，並將其融入本集團戰略及營運實踐，本集團追求經濟、環境、社會綜合效益最大化，致力實現「創新賦能綠色、美好未來」的ESG願景。

於截至2022年12月31日止年度本公司已遵守香港聯合交易所有限公司證券上市規則附錄27所載環境、社會及管治報告指引所載的「不遵守就解釋」條文。有關本公司的企業管治常規詳見本公司的2022年年報。

3.2 利益相關方參與及重要ESG議題的分析

與利益相關方的溝通及其參與是企業可持續發展的重要組成部分。本集團主要經營地點在中國內地。本集團的重要利益相關方包括其股東、顧客、員工、政府及監管機構、業務夥伴、社區及公眾和生態環境。通過與其利益相關方的溝通，了解各方期望及建議，為本集團營運決策提供指引，為行業及社會可持續發展做出更積極的貢獻。

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In 2022, the Board analysed the materiality of various ESG issues with reference to peer practice and expert opinions, in light of the Group's actual operating circumstances, issues that are highly concerned by key stakeholders and have material impact on the Group's business, identified and determined the Group's key ESG issues, and gave a salient response to these key issues in this report.

2022年，董事會採取同業對標及專家意見相結合的方式，結合本集團實際營運的情況，重要利益相關方高度關注且對本集團業務有重要影響的議題，分析各項ESG議題的重要性，識別及釐定本集團的重要ESG議題，並在本報告中對該等重要議題進行重點回應。

ESG issues ESG議題		Materiality analysis 重要性分析	Corresponding section 對應章節
Climate change and use of resources 氣候變化及資源使用	Climate change and use of energy 氣候變化及能源使用	<p>The Group’s integrated circuits design operation does not involve manufacturing, and its four business operational locations are located in industrial parks or business centers of first-tier cities with well-developed infrastructure and facilities, so climate change has minimum impact on the Group’s operations. However, in response to China’s “Peak carbon dioxide emissions and carbon neutrality targets”, the Group is also doing its best to promote the efficient use of resources and to reduce energy consumption during operations.</p> <p>本集團的集成電路設計業務不涉及製造環節，而其四個業務營運點均分佈在一線城市基建及配套完善的工業園區或商業中心，因此氣候變化對本集團的營運影響甚微。但是，為了響應中國「碳达峰、碳中和目標」，本集團亦盡己所能倡導資源的高效使用，竭力減少營運過程中的能源消耗。</p>	7.1 Green operations 7.1 綠色營運
	Use of water resource 水資源使用	<p>The Group consumes both water resource and packaging materials used in finished products during operations.</p>	7.1 Green operations 7.1 綠色營運
	Packaging materials used in finished products and paper used in office 製成品所用包裝材料及辦公用紙	<p>Managing the use of resources can help to reduce the Group’s operating costs as well as the Group’s impact on the environment.</p> <p>本集團營運過程中同時消耗水資源以及製成品所用包裝材料。管理資源的使用有助於降低本集團的營運成本，同時也有助於減少本集團對環境的影響。</p>	7.1 Green operations 7.1 綠色營運

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ESG issues ESG議題		Materiality analysis 重要性分析	Corresponding section 對應章節
Emissions 排放物	Exhaust and greenhouse gas emissions 廢氣及溫室氣體排放	The Group is principally engaged in the business of design of smart cards and security chips and its operation does not involve manufacturing. Apart from greenhouse gases, non-hazardous wastes produced in offices (such as waste paper), and a small number of waste toner cartridges, the Group does not produce significant exhaust emission, cause water and land pollutions and generate hazardous wastes during operations. 本集團的主營業務為智能卡及安全芯片之設計，其業務不涉及製造環節。除溫室氣體、辦公環節產生的無害廢棄物（如廢紙）以及少量廢棄碳粉匣外，本集團於營運過程中並無產生顯著廢氣排放、向水及土地排污以及產生有害廢棄物。	7.1 Green operations 7.1 綠色營運
	Cause water and land pollutions 向水及土地排污		7.1 Green operations 7.1 綠色營運
	Hazardous and non-hazardous waste generation 有害及無害廢棄物產生		7.1 Green operations 7.1 綠色營運
Environment and natural resources 環境及天然資源		In the process of smart card chips manufacturing, suppliers who work with the Group will exert impacts on the environment and natural resources. 在智能卡芯片製造過程中與本集團合作的供應商會對環境及天然資源產生影響。	7.2 Green products 7.2 綠色產品
Employment and labour practices 僱傭及勞工常規	Employment 僱傭	Employees are an asset to the Group and a driving force for the Group to innovate continuously. Therefore, the rights and benefits, health and safety, training and development of employees are all key areas of work of the Group regarding corporate social responsibility. 員工被視為本集團的資產，同時為本集團提供不斷創新的重要動力。因此，員工的權益及福利、健康及安全、培訓及發展均為本集團於企業社會責任方面的重要工作。	5.1 Employment and employee benefits 5.1 僱傭及員工福利
	Health and safety 健康及安全		5.3 Occupational health and safety 5.3 職業健康及安全
	Training and development 培訓及發展		5.2 Training and development 5.2 培訓及發展
	Labour standards 勞工準則		5.1 Employment and employee benefits 5.1 僱傭及員工福利

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ESG issues ESG議題		Materiality analysis 重要性分析	Corresponding section 對應章節
Supply chain management 供應鏈管理	Management of environmental and social risks of the supply chain 供應鏈的環境及社會風險管理	Effective supply chain management not only helps the Group to avoid environmental and social risks, but is also crucial to the Group's product quality. 有效的供應鏈管理不僅能幫助本集團規避在環境及社會方面的風險，也對本集團的產品質量至關重要。	6.1 Supply chain management 6.1 供應鏈管理
	Development of security chips 安全芯片開發	The rapid development of 5G and the Internet of Things continues to raise the market demand for information safety, and thus the importance of development of security chips to the Group's business continues to grow. 5G和物聯網的高速發展不斷提升市場對信息安全的需求，因此安全芯片開發對於本集團業務的重要性也在不斷增加。	4.1 Information safety 4.1 信息安全
Product responsibility 產品責任	Quality of products and services 產品及服務的質量	Effective product and service quality management are the foundation for achieving sustainable development of the Group. 有效的產品及服務質量管理為本集團實現可持續發展的基礎。	4.2 Quality management 4.2 質量管理 4.4 Customer service 4.4 顧客服務
	Intellectual property management 知識產權管理	The operation of the Group involves the use of intellectual properties owned by customers, suppliers or the Group. Therefore, protecting the intellectual properties of the Group and business partners, and avoiding infringement of others' intellectual properties are all key areas of work of the Group regarding corporate social responsibility. 本集團的營運會涉及到使用顧客、供應商或本集團自身擁有的知識產權。因此，保護自身及業務夥伴的知識產權，同時防止侵犯他人的知識產權為本集團於企業社會責任方面的重要工作。	4.3 Research and development innovation, and intellectual property protection 4.3 研發創新與知識產權保護
	Customers' information safety and privacy protection 顧客信息安全及私隱保護	The operation of the Group involves confidential information of some of its customers and business partners. 本集團的營運會涉及到部分顧客及業務夥伴的機密信息。	4.4 Customer service 4.4 顧客服務
	Anti-corruption practices 反貪污常規	Anti-corruption is a key safeguard for the healthy and sustainable development of the Group's business. 反貪污是本集團的業務健康及可持續發展的重要保障。	6.2 Anti-corruption 6.2 反貪污

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ESG issues ESG議題		Materiality analysis 重要性分析	Corresponding section 對應章節
Community investment 社區投資	Community welfare 社區公益	The Group mainly operates in Mainland China. The local government and society expect enterprises to fulfill their social responsibilities through poverty alleviation and social welfare projects. 本集團主要營運地點在中國內地，當地政府及社會期待企業通過扶貧和社會公益項目履行其社會責任。	8. Community investment 8. 社區投資

3.3 ESG working group

The Group has established an ESG working group as the manager and coordinator of ESG work, which is headed by the deputy managing director of the Company. The ESG working group is responsible for implementing ESG tasks to all relevant departments and reporting the progress of the ESG work to the Board on a regular basis.

The duties of the ESG working group are set out in the section headed "Environmental, Social and Governance Management Statement from the Board" of this report.

4. PRODUCTS AND SERVICES

The Group regularly reviews the management systems regarding aspects such as safety, advertisement, labelling and privacy of its products and services by adhering to the "Innovate through reform and cherish integrity towards the world" operational philosophy, and complying with the Standardisation Law of the People's Republic of China, the Intellectual Property Law of the People's Republic of China, the Product Quality Law of the People's Republic of China and the Advertising Law of the People's Republic of China. In 2022, the Group improved the information safety management system, product quality management system, intellectual property management system and customer service system. In 2022, there was no litigation against the Group and no violation of laws and regulations by the Group in relation to the safety, advertisement, labelling and privacy of its products and services.

3.3 ESG工作小組

本集團成立了ESG工作小組作為ESG工作的管理者與協調者，由本公司副董事總經理擔任組長。ESG工作小組負責將ESG任務落實到各相關部門，並定期向董事會匯報ESG工作進展。

ESG工作小組責任載於本報告標題為「董事會的環境、社會及管治管理聲明」一節內。

4. 產品及服務

本集團秉承「知變圖新、誠達天下」的經營理念，遵守《中華人民共和國標準化法》、《中華人民共和國知識產權法》、《中華人民共和國產品質量法》及《中華人民共和國廣告法》，對其產品及服務的安全、廣告、標籤及私隱等方面的管理制度定期進行檢討。2022年，本集團完善了信息安全管理體系、產品質量管理體系、知識產權管理體系及顧客服務體系。本集團於2022年在其產品及服務的安全、廣告、標籤及私隱方面並沒有訴訟和違法及違規事件。

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4.1 Information safety

As the practitioner and promoter of the smart card chips design industry in China, the Group regards maintenance of information safety as its own responsibility, complies with the laws and regulations and the relevant requirements regarding information safety management such as the Electronic Information Industry Production Safety Management Requirements, the Computer Information System Safety Protection Regulation of the People's Republic of China, the Network Security Law of the People's Republic of China, the Commercial Cryptographic Management Regulations, etc. The Group focuses on autonomous research and development of smart cards and security chips while building a safe operating environment, and provides the foundation for China's information technology modernisation and information safety.

The Group established an information safety management system by adhering to the Group's information safety approach of "Catering for demand for safety through system protection; seeking for continuous development through the involvement of all staff", with reference to the requirements of standards such as the Information Technology – Security Technology – Information Safety Management System – Requirements (ISO/IEC 27001), the Information Technology – Security Technology – Information Safety Management Practical Rules (ISO/IEC 27002), etc. The Group has also set up an information safety management team to coordinate information safety management work and ensure stable operation of the information safety management system.

In order to further consolidate and raise information safety performance and maintain the effective operation of the information safety management system, Huada Electronics established the information safety targets and the ancillary management requirements to assist external suppliers to improve information safety management. In 2022, an information safety awareness campaign for all employees was conducted to raise their awareness of information safety.

4.1 信息安全

本集團作為中國智能卡芯片設計行業的實踐者及推動者，以維護信息安全為己任，遵守《電子信息產業安全生產管理規定》、《中華人民共和國計算機信息系統安全保護條例》、《中華人民共和國網絡安全法》、《商用密碼管理條例》等信息安全管理相關的法律及法規及有關規定，研發自主可控的智能卡及安全芯片，同時打造安全的營運環境，為中國信息技術現代化以及信息安全提供基石。

本集團秉承「系統防範，滿足安全需求；全員參與，追求持續發展」的信息安全方針，參考ISO/IEC 27001《信息技術—安全技術—信息安全管理体系—要求》、ISO/IEC 27002《信息技術—安全技術—信息安全管理体系實用規則》等標準要求，建立信息安全管理体系，並設立了信息安全小組，負責協調信息安全工作，確保信息安全管理体系的穩定運行。

為進一步鞏固、提高信息安全績效，保持信息安全管理体系運行的有效性，華大電子建立信息安全目標及配套管理要求，協助外部供應商完善信息安全工作。於2022年對全體員工進行了信息安全意識宣貫，提升員工信息安全意識。

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• Development of security chips

The Group strives to promote the continuous development of China's security chips technology, products and applications. With globally advanced and China's leading security attack and defense technology, covering the protection technology at levels such as the system level, algorithm level, circuit level and layout level along with technologies such as side channel attack, malfunction-injection attack and physical attack technologies, a well-established product safety management system is formed. A number of high-end security chips were accredited with security qualification certification such as the China EAL4+ Certificate and EAL5+ Certificate, CCEAL6+ Certificate, EMVCo Certificate, etc. Security chip series products are widely used in sectors such as financial payment, social security, resident health, public transportation, telecommunications, network authentication, identity authentication, Internet of Things, intelligent connected vehicles, etc.

The Group continued to lead China's security chips technology, keep pace with international standards, and demonstrate China's "Smart card chips" capability. The Group has launched and achieved large-scale application in a number of automotive grade security chip products for intelligent connected vehicles applications. Related products had also been gradually applied on a large scale in the information safety sector such as Internet of Things, intelligent connected vehicles, 5G communication, and payment. In 2022, the Group continued to enhance its products' comprehensive competitiveness in the application of smart card industry, and participated in the preparation of the Telecommunication Terminal Industry Forum Association's Security Assurance Capability Requirements for eUICC Card Manufacturers group standard. In addition, the Group's product (CIU9872B_01_C14.0) was awarded the Certificate of IT Product Information Security Certification (China EAL5+) by the China Cybersecurity Review Technology and Certification Center and the Certificate of UnionPay Card Chip Product Security Certification for the first time in 2022.

• 安全芯片開發

本集團致力於推進中國安全芯片的技術、產品及應用的持續發展。憑藉世界先進、中國領先的安全攻防技術，覆蓋系統級、算法級、電路級、版圖級等防護技術，具備側信道攻擊、故障注入攻擊、物理攻擊等技術，形成了完整的產品安全管理體系；多款高端安全芯片獲得中國EAL4+及EAL5+、CCEAL6+、EMVCo等安全資質認證；安全芯片系列產品已廣泛應用於金融支付、社會保障、居民健康、公共交通、電信、網絡認證、身份識別、物聯網、智能網聯車等領域。

本集團繼續引領中國安全芯片技術、緊隨國際水平，展現中國「芯」實力。本集團推出多款智能網聯車應用的車規級安全芯片產品並實現規模應用；同時相關產品也在物聯網、智能網聯車、5G通信、及支付等信息安全領域逐步形成規模應用。2022年，本集團在智能卡行業應用方面持續提升其產品綜合競爭能力，並參與編製電信終端產業協會團標《eUICC卡生產企業安全保障能力要求》。此外，本集團產品(CIU9872B_01_C14.0)在2022年首次獲得中國網絡安全審查技術與認證中心的IT產品信息安全認證證書(中國EAL5+)及銀聯卡芯片產品安全認證證書。

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- *Safe operating environment*

While focusing on the development of smart card chips with high security and high reliability, the Group also pays attention to the safety of physical environment, that is, protecting computer network equipment and facilities from being destroyed by accidents such as earthquakes, floods, etc., as well as human acts. The Group formulated a series of physical safety management system, such as the Physical Safety Control Procedures, the Security Facilities Management Measures, the Central Control Room Control Specifications, the Security Officer Management Measures, etc., for protecting the design and development of smart cards and security chips.

In 2022, the Group revised the Office Facilities, Security Facilities and Working Environment Control Procedures which covers laboratory temperature and humidity management requirements, office environment management, etc. In addition, the Group conducted information safety appraisal on 44 suppliers, and requested the suppliers to improve on the issues identified during the appraisal and complete the improvements as scheduled.

4.2 Quality management

- *Quality management system*

The integrated circuits design operation of the Group comprises the design of smart cards and security chips and the development of application system. The Group is not involved in aspects such as manufacturing, assembling, transportation, albeit adhering to the tenet of "Zero defect" in provision of products and services to customers as well as the quality approach of "Catering for customers' demand through continuous innovation, seeking for customers' satisfaction through the involvement of all staffs". The Group promotes comprehensive quality management with the involvement of all staffs, striving to control and continuously improve the entire process of production of products.

- 安全營運環境

在專注於高安全性、高可靠性智能卡芯片開發的同時，本集團亦注重物理環境安全，即保護計算機網絡設備及設施免遭地震、水災等事故以及人為行為導致的破壞。本集團制定有《物理安全控制程序》、《安防設施管理辦法》、《中控室控制規範》、《保安員管理辦法》等一系列物理安全管理制度，為智能卡及安全芯片設計及開發提供保障。

2022年，本集團對《辦公設施、安防設施及工作環境控制程序》進行修訂，涵蓋實驗室溫濕度的管理要求及辦公環境管理等內容。此外，本集團對44家供應商開展信息安全評審，對評審發現的問題要求供應商進行改善並按期完成。

4.2 質量管理

- 質量管理體系

本集團的集成電路設計業務涵蓋智能卡及安全芯片之設計及應用系統開發，業務不涉及製造、封裝及運輸等環節，但秉承著向顧客提供「零缺陷」產品及服務的宗旨，「持續創新，滿足顧客需求，全員參與，追求顧客滿意」的質量方針。本集團倡導全員參與的全面質量管理，致力於對產品的生產實現全過程控制及持續改進。

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The Group established corresponding management measures for aspects such as product design and development, risk control, outsourcing of production control, and performance evaluation, in accordance with the requirements of ISO 9001 Quality Management System, so as to meet customers' demand for diversification, personalisation and refinement through systematic management.

In 2022, based on the foundation of conducting continuous ISO 9001 Quality Management System audits and follow-up works, the Group revised 15 management documents including the quality manual and internal audit control procedures according to the requirements of IATF 16949 Quality Management System.

本集團按照 ISO 9001 質量管理體系要求，在產品設計及開發、風險控制、生產外包控制、績效評價各環節建立了相應的管理辦法，通過體系化管理滿足顧客多樣化、個性化、精細化等訴求。

2022年，在持續開展ISO 9001質量管理體系審核及跟進工作的基礎上，本集團依據IATF 16949質量管理體系要求，修訂了質量手冊、內部審核控制程序等15項管理文件。

Quality management system 質量管理體系



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For substandard products found during operations, the Group will deal with the substandard products in accordance with the requirements of the Substandard Products Control Procedures, while arrangements will be made for the responsible departments to analyse the reason for the generation of substandard products, formulate rectification and precautionary measures, and be responsible to follow up on the implementation and the effectiveness of these measures. In 2022, there was no recall of the Group's products sold or delivered due to safety and health concerns.

For the management of labelling of product, the Group formulated labelling requirements for information such as product model number, product lot number, product quantity, time of processing, origin, etc. with respect to the packaging specifications for products such as IC card, smart card, etc.

- *Quality inspection procedures*

The Group conducted quality inspection on products such as wafers, modules, cards, circuits, etc., that are researched and developed autonomously with procurement and processing outsourced in accordance with the operational requirements of the quality inspection procedures imposed by its quality management system. Quality inspections are performed by inspectors with professional skills, in accordance with the inspection specifications and practice guidelines, and inspections are performed by using professional inspection equipment, so as to prevent the acceptance of substandard products. In addition, the professional high-precision instruments used for quality inspection are calibrated regularly to ensure the accuracy of the inspection result.

- *Quality culture*

The Group held quarterly quality meetings in 2022 to provide attendees with a comprehensive understanding of the quality problems and the causes through regularly compiling and reporting on product and service quality problems and treatments, so as to guide and enhance the staff's awareness of product and service quality, and create a quality culture of full participation.

針對在營運過程中發現的不合格品，本集團按照《不合格品控制程序》的要求進行處置，同時安排責任部門分析不合格品產生原因、糾正及預防措施制定，以及負責跟進該等措施的實施情況及成效。本集團於2022年並沒有因安全及健康理由而須對已售或已運送產品進行回收的事件。

在產品標籤的管理方面，本集團制定了針對IC卡、智能卡等產品包裝規範，明確規定對產品型號、產品批號、產品數量、加工時間、產地等信息的標籤要求。

- *質量檢測程序*

本集團按照其質量管理體系對質量檢測程序的操作要求，針對其自主研發並委外採購及加工的圓片、模組、卡片、電路等產品進行質量檢測。質量檢測由具備專業技能的檢測人員，依據檢測規範及作業指導書，使用專業的檢測設備進行檢測，防止接收不合格品。此外，檢測人員通過定期對用於質量檢測的專業高精密儀器進行校準，以保證檢測結果的準確性。

- *質量文化*

本集團於2022年召開季度質量會，通過定期編匯並報告產品及服務質量問題及處理情況，使參會者全面地認識質量問題及產生原因，從而引導與提升員工的產品及服務質量意識，營造全員參與的質量文化。

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In addition, the Group required employees to complete online quality knowledge quizzes during the “Quality month” activities in 2022 and invited external professional lecturer to provide training on “Advance product quality planning”, “Design failure mode and effects analysis” and “VDA6.3 process audit” for research and development personnels, so as to promote the integration of IATF 16949 Quality Management System with the existing quality management system.

4.3 Research and development innovation, and intellectual property protection

The Group attaches importance to original innovation, collective innovative capabilities, scientific discovery and technology invention, through incentive measures encourages employees to actively apply for intellectual properties and publish thesis, etc. Huada Electronics has established awards such as the Technology Contribution Award and the Technology Innovation Award, etc. to commend employees for their significant research and development innovation achievements. In 2022, 6 and 3 employees received the Technical Contribution Award and Technical Innovation Award, respectively. In addition, Huada Electronics has conducted training on “Smart card chip products development process”, aiming to cultivate research and development personnel’s innovation awareness.

In 2022, research and development costs of the Group amounted to HK\$348.1 million. The percentage of research and development costs to revenue was 14.0%. Research and development during the year primarily focused on the research and development of secure element chip and secure microcontroller unit chip series of products, the continuous improvements in smart card products’ performance, research in the secure element chips for the intelligent connected vehicles sector and the Internet of Things sector applications, and the development of application systems and solutions. In addition, the Group participated in the preparation of five industry standards in 2022, including the Testing Methods for Card and Identity Authentication Security Equipments, Cryptographic Application Interface Specifications for Multi-Application Carriers and Security Evaluation Specifications for Supply Chain of Information Technology Products.

As at 31 December 2022, the Group owned 455 patents, registered 159 software copyrights and published 102 thesis.

此外，本集團於2022年「質量月」活動中要求員工完成線上質量知識答題，並聘請外部專業講師向研發人員進行「先期產品質量策劃」、「設計階段的潛在失效模式分析」、「VDA6.3過程審核」培訓，推進IATF 16949質量管理體系與現有質量管理體系的整合。

4.3 研發創新與知識產權保護

本集團重視原始創新、集成創新能力，科學發現及技術發明，通過獎勵措施鼓勵員工積極進行知識產權申請及論文發表等。華大電子設立了《技術貢獻獎》及《技術創新獎》等獎勵，表揚有重大研發創新成果的員工，2022年分別有6名及3名員工獲得《技術貢獻獎》及《技術創新獎》。此外，華大電子開展「智能卡芯片產品開發流程」培訓，旨在培養研發人員創新意識。

2022年，本集團研究及開發成本為348.1百萬港元，研究及開發成本佔收入的百分比為14.0%，年內研究及開發主要側重於安全芯片和安全主控芯片系列產品的研究及開發，智能卡產品性能的持續提升，應用於智能網聯車領域及物聯網領域的安全芯片研究以及應用系統和解決方案的開發。此外，本集團在2022年參與編製了《卡及身份識別安全設備測試方法》、《多應用載體密碼應用介面規範》及《信息技術產品供應鏈安全評價規範》等5項行業標準。

截至2022年12月31日，本集團擁有455項專利，登記159項軟件著作及發表102篇論文。

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The Group conducts patent retrieval and infringement analysis at all stages of research and development, and maintains awareness of the patent information of other parties to reduce the risk of infringing others' intellectual properties. Moreover, the Group conducts intellectual property training for employees every year. In 2022, Huada Electronics conducted 2 training activities on intellectual property to constantly raising employees' awareness on intellectual property protection.

The Group respects intellectual properties, regulates the usage of intellectual properties from customers and third parties. It also keeps all business partners' product's technical information strictly confidential. Moreover, the Group formulated the Intellectual Property Management Measures to protect its own intellectual properties and continues to improve and amend it.

The Intellectual Property Management Measures explicitly defines the responsibilities and working procedures for each of the departments and personnel, and states the detailed requirements regarding the assessment, searching, retrieval and analysis of relevant intellectual properties during the research and development process, contract filing management, intellectual properties ownership, protection and application of intellectual properties, trainings and awards. The Intellectual Property Management Measures facilitates the formation of innovation mechanism, and creates a sound environment with rules and precedents to follow for obtaining and protecting intellectual properties.

4.4 Customer service

- Customer service system

The Group adheres to the "Users first and customers foremost" philosophy and builds a sound customer service system to provide more convenient and better quality service to customers. In addition, the Group has professional support team to provide immediate professional technical services to customers to solve their technical problems before, during and after a purchase.

本集團於研發各環節開展專利檢索與侵權分析，並保持對他人的專利信息的關注，減少侵犯他人知識產權的風險。此外，本集團每年向員工開展知識產權培訓。華大電子於2022年開展了兩次知識產權培訓活動，持續提升員工知識產權保護意識。

本集團尊重知識產權，規範使用顧客及第三方的知識產權，亦對所有業務夥伴的產品技術信息進行嚴格保密。此外，就自身知識產權的保護，本集團制定了《知識產權管理辦法》，並持續完善修訂。

《知識產權管理辦法》明確了各部門及人員的職責及工作程序，對包括研發過程中對相關的知識產權的評估、查新、檢索、分析、合同檔案管理、知識產權歸屬、知識產權的保護及申請、培訓及獎勵等都做了詳細的規定，《知識產權管理辦法》促進了創新機制的形成，營造了獲取和保護知識產權工作有法可依、有章可循的良好環境。

4.4 顧客服務

- 顧客服務體系

本集團秉承「用戶第一、顧客至上」的理念，營造完善的顧客服務體系，為顧客提供更便捷、優質的服務。此外，本集團擁有專業支援團隊，為顧客即時提供售前、售中、售後的專業技術服務，解決技術難題。

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Customer Complaint Handling Procedures are formulated by the Group to assist customers to solve any issues encountered after products are sold and during usage, and feedback from customers will be used for continuous raising of products and services quality. In addition, depending on the issue raised by the customer, the Group will organise respective professionals from the failure analysis team, product research and development and design team, production and processing professional technical team, sales service team, technical support team and project management team to work together to analyse, identify the fundamental causes of the issue, formulate rectifying and precautionary measures, and follow up with the customer's subsequent usage to ensure the effectiveness of such measures.

As for customers' information safety and privacy protection, the Group formulated the Technology Confidentiality Agreement Management Measures and the Confidentiality Management Requirements, and employees are required to keep trade secrets of the Group and customers in strict confidence, so as to ensure information confidentiality for both sides during business interaction between the Group and customers.

- *Customer satisfaction survey*

The Group attaches importance to customer satisfaction survey and through the survey identifies key factors affecting the satisfaction of customers so as to raise the quality of its products and services. The Group sends out customer satisfaction questionnaires to customers each year to understand customer's satisfaction, opinions and suggestions on aspects such as products' or projects' design quality, service quality, and pace and capability in handling issues arose, and the Customer Satisfaction Surveillances and Measurements Evaluation Report will be prepared summarising feedbacks from customers and passed to the respective departments for continuous improvement of products and services quality.

本集團制定《顧客抱怨處理程序》，幫助解決在產品銷售後、顧客使用中遇到的任何問題，並同時通過顧客的反饋持續提升產品及服務的質量。此外，本集團根據顧客提出的問題，組織失效分析團隊、產品研發設計團隊、生產加工專業技術團隊、銷售服務團隊、技術支援團隊及項目管理團隊中相關的專業人員，共同完成整個問題的分析工作，挖掘問題的根本原因，制定糾正及預防措施，並跟進顧客的後續使用情況，以確保該等措施的成效。

在顧客信息安全及私隱保護方面，為確保本集團與顧客業務交往中雙方的信息保密，本集團制定了《技術保密協議管理辦法》以及《保密管理規定》，並要求員工需嚴格保守本集團及顧客的商業秘密。

- *顧客滿意度調查*

本集團重視顧客滿意度調查，通過調查挖掘影響顧客滿意度的關鍵因素，從而提升其產品及服務的質量。本集團每年向顧客發送顧客滿意度調查表，以了解顧客對產品或項目的設計質量、服務質量、處理問題的速度及能力等方面的滿意度，意見及建議，並編製《顧客滿意度監視及測量評價報告》，將結果反饋給相關部門，持續提升產品及服務的質量。

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Statistics on products and services key performance indicators 產品及服務關鍵績效指標統計

Indicators	指標	2022 2022年度	2021 2021年度
Number of customer complaints received	顧客投訴事件次數	119	112
Percentage of customer complaints dealt with (%)	顧客投訴處理率(%)	100.00	100.00
Customer satisfaction (%)	顧客滿意度(%)	95.47	96.25

5. EMPLOYEES

The Group regularly reviews and improves the management systems regarding aspects such as employees' rights, remuneration and benefits, recruitment and promotion, training and development, working environment and occupational health, child labour, forced labour, etc. by adhering to the "Responsibility orientated, attaches importance to competent and rewards linked with performance" talent philosophy, and complying with the laws and regulations and the relevant requirements of the Labour Law of the People's Republic of China, the Production Safety Law of the People's Republic of China, the Women's Rights and Interests Protection Law of the People's Republic of China and the Paid Annual Leave for Employees Regulations, etc. In 2022, there was no litigation against the Group and no violation of laws and regulations by the Group in relation to employment, occupational health and safety, child labour and forced labour.

5.1 Employment and employee benefits

• Employment and employees' rights

The Group attaches importance to attracting and fostering of talents, protecting employees' equal rights in areas such as terms of employment, training, promotion, remuneration, etc. and ensuring no discrimination against any person on grounds such as gender, marital status, disability, age, race, family conditions, nationality, religion, etc. takes place. In addition, the Group resolutely prohibits child labour and all forced labour.

5. 員工

秉承「盡責是才、重能酬績」的人才理念，遵守《中華人民共和國勞動法》、《中華人民共和國安全生產法》、《中華人民共和國婦女權益保障法》及《職工帶薪年休假條例》等法律及法規及有關規定，本集團對員工權益、薪酬及福利、招聘及晉陞、培訓及發展、工作環境及職業健康、童工、強制勞工等方面的管理體系定期進行檢討及完善。本集團於2022年在僱傭、職業健康及安全、童工及強制勞工方面並沒有訴訟及違法及違規事件。

5.1 僱傭及員工福利

• 僱傭及員工權益

本集團注重人才的引進及培養，保障員工在僱傭條件、培訓、晉陞、薪酬等方面的平等權利，確保沒有因性別、婚姻狀況、殘疾、年齡、種族、家庭狀況、國籍、宗教等因素而遭受歧視。另外，本集團堅決杜絕僱用童工及一切強制勞工的行為。

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The Group formulated the Administrative Management System, which clearly sets out the management of the recruitment and dismissal of employees. The Group also formulated the Employee Code, which covers area such as standards of daily behaviour, attendance management, sick leave and other leave management, performance management, remuneration and benefits, trainings of employees.

The Group encourages employees to introduce talents with competitiveness. Through regularly issuing demand for talents and employees introducing talents based on such demand, the Group identifies talents who will benefit its development, enhances the capability of the Group and enlarges its talent pool.

In addition, the Group established an e-HR human resources information system covering all employees, featuring online management of employee's promotion, training and remuneration, etc.

The intense competition for talents in the integrated circuits design industry has led to the loss of certain employees of the Group. The Group, through internal and external salary comparisons and comprehensively considered factors such as annual staff cost budget, annual staffing requirements, etc., adjusts the salary levels of employees to remain competitive.

本集團制定了《行政管理制度》，其中明確規定了在員工招聘及解僱方面的管理工作。本集團亦制定了《員工守則》，涵蓋員工的日常行為準則，考勤管理，病、事假管理，績效管理、薪酬及福利、培訓等內容。

本集團鼓勵員工推薦有競爭力的人才，通過定期發佈人才需求，而員工根據需求推薦人才，從而為本集團尋找契合發展的人才，增強本集團實力、擴大人才隊伍。

此外，本集團建立了覆蓋全體員工的e-HR人力資源信息系統，涵蓋員工晉升、培訓、薪酬等的在線管理。

集成電路設計行業的人才競爭激烈，導致本集團若干員工的流失。本集團通過內外部薪酬對比，綜合考慮年度人工成本預算、年度人員編制需求等因素，調整員工薪酬以保持競爭力。

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Overview of employment and employee's rights system 僱傭及員工權益制度概覽		
Recruitment and dismissal 招聘及解僱	Work hours and leave 工時及休假	Remuneration and benefits 薪酬及福利
<p>✓ Recruitment: New employees are recruited in accordance with the principle of "Openness, equality, competition and on the basis of merit".</p> <p>✓ 招聘: 按照「公開、平等、競爭、擇優」的原則招聘錄用新員工。</p>	<p>✓ Work hours: Work hours meets the requirements of operational location's laws and regulations.</p> <p>✓ 工時: 工時符合營運地法律及法規的要求。</p>	<p>✓ Remuneration: The remuneration of each position is determined with reference to market practices and with reasonable adjustments after considering job position values and contributions.</p> <p>✓ 薪酬: 參考市場慣例定義崗位薪酬，同時考慮崗位價值及貢獻對薪酬進行合理的調整。</p>
<p>✓ Dismissal: Employees are dismissed in accordance with the related requirements of the Employee Code and in compliance with the requirements of operational location's laws and regulations.</p> <p>✓ 解僱: 按照《員工守則》相關規定解僱，並符合營運地法律及法規的要求。</p>	<p>✓ Working overtime: Employees are entitled to pay or time-off in lieu for working overtime. Overtime compensation meets the requirements of operational location's laws and regulations.</p> <p>✓ 加班: 員工加班享有加班費或加班調休權利，加班補償符合營運地法律及法規的要求。</p>	<p>✓ Social insurance: Various kinds of social insurances are purchased for all employees in accordance with the requirements of operational location's laws and regulations.</p> <p>✓ 社會保險: 按照營運地法律及法規的要求為全體員工繳納各項社會保險。</p>
	<p>✓ Leave: Paid annual leave, marriage leave, bereavement leave, maternity leave, sick leave, etc., are provided pursuant to operational location's laws and regulations.</p> <p>✓ 休假: 帶薪年休假、婚假、喪假、生育假、病假等按營運地法律及法規提供。</p>	<p>✓ Benefits: Employees are provided with various benefits such as annual body checks, supplementary medical insurance, etc. in accordance with the actual circumstances of the Group.</p> <p>✓ 福利: 結合本集團實際情況為員工提供多項福利，如年度體檢及補充醫療保險等。</p>

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Statistics on employment key performance indicators 僱傭關鍵績效指標統計

Indicators		指標	2022 2022年度	2021 2021年度
Number of employees		員工人數	422	407
By gender:	Male	按性別： 男性	272	255
	Female	女性	150	152
By type of employment:	Permanent	按僱傭類型： 勞動合同制	411	395
	Secondment	勞務派遣制	11	12
	Part-time	兼職	0	0
By age group:	Over 50	按年齡組別： 50歲以上	18	16
	30 to 50	30歲至50歲	339	334
	Under 30	30歲以下	65	57
By geographical region:	Mainland China ¹	按地區： 中國內地 ¹	420	405
	Hong Kong ¹	香港 ¹	2	2
Employee turnover rate (%)		員工流失率(%)	8	15
By gender:	Male	按性別： 男性	9	18
	Female	女性	7	9
By age group:	Over 50	按年齡組別： 50歲以上	11	19
	30 to 50	30歲至50歲	8	14
	Under 30	30歲以下	9	18
By geographical region:	Mainland China	按地區： 中國內地	8	15
	Hong Kong	香港	0	0

Note:

1. The number of employees in Mainland China and Hong Kong for 2021 disclosed in this report shall prevail.

附註：

1. 2021年度中國內地及香港員工人數以本報告披露為準。

• Employees communication and caring

Effective communication with employees is crucial to the formulation of decision-making and enterprise development. The Group strives to build an open working culture, and strengthen the communication between employees and management. It has also sets up various communication channels to understand employees' opinions, so as to create a frank and an open communication atmosphere.

• 員工溝通及關懷

有效的員工溝通對決策制定、企業發展至關重要。本集團致力建設開放的工作文化，並加強員工與管理層的溝通，亦設立了多樣溝通渠道以了解員工的意見，營造坦誠及開放的溝通氛圍。

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The Group cares and supports every employee who is in need. Through proactively conducting employee caring activities, the Group visits employees suffering from injuries and sickness, attends employees' wedding ceremony and funeral ceremony and helps employees who are in difficulties. The Group also conducts consolatory activities on public holidays strictly in accordance with the relevant requirements of the China Federation of Trade Unions. Huada Electronics formulated the Trade Union Expenditure Management Measures, stating the detailed requirements on expenditure for condolences to staff and support for employees who are in difficulties. As for caring for female employees, Huada Electronics has set up nursing rooms, and organised the "Blooming of the beauty" on the March 8th Women's Day activity to lead the female staff to experience the handmade production of traditional Chinese arts such as pottery, wood arts, printing and dyeing, knitting, etc. in 2022.

Overview of caring activities for employees in 2022

- ✧ "Sending coolness" consolatory activity in summer, providing employees with cooling consolatory products to prevent summer heat.
- ✧ "Sending warmth" consolatory activity in winter, providing employees with consolatory gifts for keeping warm.

Overview of employee activities in 2022

- ✧ "Gather to celebrate the Year of Tiger" cloud gala activity, which brings together the four cities of Beijing, Shanghai, Shenzhen and Xi'an.
- ✧ "Cheer up for winter Olympics and move forward together" walking activity.
- ✧ "Blooming of the beauty" on the March 8th Women's Day activity.
- ✧ Badminton competition in Huada Electronics.

本集團關心及支持每一位需要幫助的員工。本集團通過積極開展員工關愛活動，做到傷病必訪、婚喪必訪、幫助困難員工，同時嚴格按照中國總工會的有關規定，開展法定節假日慰問活動。華大電子制定了《工會經費管理辦法》，對員工慰問、困難員工幫扶等的經費支出做了詳細規定。在女員工關愛方面，華大電子設置了母嬰室，並在2022年組織「巾幗芳華•鏗鏘綻放」三八女神節活動，帶領女員工進行陶藝、木藝、印染、編結等中華傳統藝術手工製作體驗。

2022年度員工關愛活動概覽

- ✧ 夏日「送清涼」慰問活動，向員工發放防暑降溫慰問品。
- ✧ 冬日「送溫暖」慰問活動，向員工發放御寒慰問品。

2022年度員工活動概覽

- ✧ 「虎虎生威鬧新春」雲聯歡活動，北京、上海、深圳、西安四地連線雲歡聚。
- ✧ 「為冬奧加油•一起向未來」健走活動。
- ✧ 「巾幗芳華•鏗鏘綻放」三八女神節活動。
- ✧ 華大電子羽毛球比賽。

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- ✧ “20 years of thick and thin, 20 years of success and achievements” themed photo exhibition activity.
- ✧ “Love Huada - Running for happiness and fun” creative running activity.

5.2 Training and development

• *Employees training*

Facilitating employees' growth provides impetus for corporate development. The Group's employee training is divided into three levels: corporate level, departmental level and individual level. Corporate level training focuses mainly on cross-departmental and internal all-purpose trainings, such as new employee trainings, and quality and safety requirements trainings. Departmental level training focuses mainly on enhancing knowledge and skills in departmental professional areas. Trainings for individuals act as a useful supplement to the two types of training above.

Employee of Huada Electronics is entitled to an individual training allowance of up to RMB3,000 per person per year starting from the 13th month onwards after joining. Such allowance can be used for trainings as designated by the Group, or can be used in relation to employee's job-related trainings at his/her own choice subject to prior approval by the Group.

Huada Electronics formulated the Training System, which covers area such as types of training and effectiveness assessment, training implementation, internal training instructors, etc., as well as formulated the four major categories, namely system, rules and regulations, experience exchanges, knowledge and skills, and cultural awareness, to be covered in the annual training programme.

- ✧ 「二十年風雨同舟•二十年春華秋實」主題攝影展活動。
- ✧ 「愛華大一悅奔跑•越出彩」創意跑活動。

5.2 培訓及發展

• *員工培訓*

促進員工的成長是企業發展的動力源泉。本集團的員工培訓分為公司級、部門級及個人三級。公司級培訓側重於跨部門、內部通用性培訓，如新員工培訓和質量及安全要求培訓，部門級培訓側重於知識技能提升培訓，在部門專業方向上實施，個人培訓作為前兩者的有益補充。

華大電子員工自入職後第13個月起享有個人培訓津貼，每年每人最高限額人民幣3,000元，可以由本集團指定的培訓時使用，或由員工自主選擇與本職位相關的培訓，在經過申請同意後參加使用。

華大電子制定了《培訓制度》，包含培訓類型以及效果評估、培訓實施、內部培訓講師等內容，並制定了涵蓋體系、規章及制度、經驗交流、知識及技能和文化意識四大類的年度培訓計劃。

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Overview of employee training activities in 2022

2022年度員工培訓活動概覽

Training project 培訓項目	Objectives 目的
<ul style="list-style-type: none"> New employees training 新員工培訓 	<ul style="list-style-type: none"> Help new employees to understand the company's profile, rules and regulations, etc., so that they can adapt to the working environment and integrate into the team more quickly. 幫助新員工了解公司概况、規章和制度等，使其更快適應工作環境以及融入團隊。
<ul style="list-style-type: none"> Fresh graduates training 應屆畢業生培訓 	<ul style="list-style-type: none"> Broaden fresh graduates' knowledge of integrated circuits. 擴展應屆畢業生的集成電路知識。
<ul style="list-style-type: none"> Strategic planning training for senior management 高層管理人員戰略規劃培訓 	<ul style="list-style-type: none"> Assist senior management in anchoring the company's development priorities. 協助高層管理人員錨定公司發展重點。

Statistics on employee training key performance indicators

員工培訓關鍵績效指標統計

Indicators	指標	2022 2022年度	2021 2021年度
Percentage (%) of employees who received training	員工接受培訓百分比(%)	94	94
By gender: Male	按性別： 男性	63	63
Female	女性	37	37
By grade: Senior management	按級別： 高級管理層	2	2
Middle management	中級管理層	9	9
Grass-roots employees	基層員工	89	89
Average number of hours of training received per employee per year ¹	員工每年人均接受培訓的小時數 ¹	17	27
By gender: Male	按性別： 男性	18	24
Female	女性	14	30
By grade: Senior management	按級別： 高級管理層	43	114
Middle management	中級管理層	17	61
Grass-roots employees	基層員工	16	21

Note:

附註：

1. Affected by the pandemic in 2022, the Group reduced the number of training sessions and training time, resulting in the significant change in the average number of hours of training received per employee per year for 2022 when comparing with 2021.

1. 2022年受疫情影響，本集團減少了組織培訓場次及培訓時間，導致2022年度的員工每年人均接受培訓的小時數較2021年度有較大變化。

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• Occupational development

The Group implements a qualification management system and establishes an occupational development channel to provide an important basis for employee's promotion and salary increment. The Group implements dual channel development path for the technicians that accounts over 60% of the Group's total employee headcount. The technicians are divided into six grades, those who have reached grade four can select either the management line or the technical line. In the technical line, they can become technical expert, system engineer, etc., and in the management line, they can enter into the administrative management or project management area.

5.3 Occupational health and safety

• Production safety management

The Group complied with the Production Safety Law of the People's Republic of China and formulated the Production Safety Management Requirements, specifying specific requirements such as safety production work reporting system and penalties for non-compliance with safety guidelines. In 2022, Huada Electronics adjusted its production safety structure, with the general manager of Huada Electronics serving as the director of the production safety committee and the first-level department manager of the Group serving as member. At the same time, the Group signed the Production Safety Undertaking with relevant staff to ensure production safety.

In order to ensure safe operation throughout the year, Huada Electronics organised activities such as safety thematic trainings and fire evacuation drills for its employees in 2022.

• 職業發展

本集團實施任職資格管理制度，建立職業發展通道，為員工晉陞、提薪提供重要依據。對於佔本集團總員工人數60%以上的技術類員工實行雙通道發展路徑，技術類分為六級，到四級後可選擇管理線或技術線，技術線發展到技術專家、系統工程師等，管理線則可進入行政管理或項目管理範疇。

5.3 職業健康及安全

• 安全生產管理

本集團遵守《中華人民共和國安全生產法》，制定《安全生產管理規定》，明確了安全生產工作報告制度以及違反安全指引的懲罰措施等具體要求。2022年，華大電子調整其安全生產架構，由華大電子總經理擔任安全生產委員會主任，本集團一級部門經理擔任委員。同時，本集團與相關員工簽署了《安全生產承諾書》，保障生產安全。

為確保全年安全營運，華大電子於2022年組織員工開展安全專題培訓及消防疏散演練等活動。

Statistics on employees' occupational health and safety key performance indicators
員工職業健康及安全關鍵績效指標統計

Indicators	指標	2022 2022年度	2021 2021年度
Number of work-related fatalities	因工死亡人數	0	0
Number of work-related injuries	因工受傷次數	0	1
Number of lost work days due to work-related injuries	因工傷損失工作日數	0	2

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- *Quality working environment*

Quality working environment has a direct impact on the physical and mental health and work efficiency of employees. Based on the “People-oriented” philosophy, the Group is committed to provide and maintain a warm, comfortable, healthy and safe working environment for employees. Huada Electronics has set up a library and a recreation area within its office area, so as to create a quality office arena. The Group has equipped its offices with safety packs, clearly set out the requirements for safe use of electrical appliances, installed ventilation system, etc. for new office in response to the air quality conditions in Beijing. In addition, the Group purchased travel traffic safety insurance for employees (such as insurance for employee travelling on planes, cars, etc.) to provide coverage for safe travel.

- *Anti-pandemic actions*

In 2022, in order to prevent and control the COVID-19 infection, the Group has prepared and published the Emergency Plan for Lockdown Management of Huada Technology during the COVID-19 Pandemic based on the principle of “Employee’s physical and mental health-oriented, unified leadership and differentiate responsibility by staff grade level”, promptly disseminated the requirements and precautions for the prevention and control of the anti-pandemic to all employees through various channels, and set up disinfection area within the office area.

At the same time, the Group promptly organised vaccination of employees against COVID-19 to ensure the health and safety of employees.

- *優質工作環境*

優質的工作環境對員工的身心健康及工作效率具有直接影響。本集團基於「以人為本」的理念，致力為員工提供及維持溫馨、舒適、健康而安全的工作環境。華大電子在其辦公區內設置了圖書室及休閒區，營造優質辦公空間。本集團在其辦公室內配備安全包，明確規定安全使用電器的要求；並針對北京地區的空氣質量狀況，在新辦公室安裝通風系統等。此外，本集團為員工購買差旅交通安全保險（例如員工乘坐飛機、汽車等的保險），為安全差旅提供保障。

- *抗疫行動*

2022年，為做好新型冠狀病毒感染防控工作，本集團以「員工身心健康為先、統一領導、分級負責」為原則，編製並印發《華大科技疫情封閉管理應急預案》，通過多種渠道及時向全體員工發佈抗疫防控要求及注意事項，並在辦公區設置消毒區。

同時，本集團及時組織員工接種新冠疫苗，切實保障員工的健康及安全。

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6. COMPLIANCE OPERATION

The Group considers the compliance with laws and regulations as the cornerstone of an enterprise. The Group regularly reviews and improves the management systems regarding aspects such as supply chain management and anti-corruption by complying with operational location's laws and regulations relevant to the compliance operation such as the Company Law of the People's Republic of China, the Civil Code of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, etc. There was no confirmed corruption incident and lawsuit relating to the Group or its employees in 2022. The Group has complied with all laws and regulations in relation to bribery, extortion, fraud and money laundering.

In 2022, the Group sent the Integrity Reminder Letter to directors, middle and senior level staff, explained the disciplinary requirements for expense reimbursement in the light of the business nature and job characteristics of different departments, organised employees to watch business ethics education publicity videos and conducted typical case learning activities for employees, and continuously promoted the building of business ethics culture through various channels.

6.1 Supply chain management

- *Suppliers management procedures*

The Group is principally engaged in the business of design of integrated circuit chips, and its major suppliers are integrated circuit chips manufacturers. The effective management of suppliers during the course of the Group's development can help the Group to reduce costs and cooperation risk, raise the quality of products and services, and build up a quality brand. To this end, the Group has formulated a sound supplier management system, involving aspects such as supplier introduction and risk assessment, periodic appraisal, and win-win cooperation.

6. 合規營運

本集團認為遵守法律及法規乃企業之基石，遵守《中華人民共和國公司法》、《中華人民共和國國民法典》、《中華人民共和國反不正當競爭法》等與合規營運相關的營運地法律及法規，對本集團供應鏈管理及反貪污等方面的管理制度定期進行檢討及完善。本集團於2022年並沒有與其或其員工有關的已確認的貪污事件及訴訟。本集團已遵守所有與賄賂、勒索、欺詐及洗黑錢相關的法律及法規。

2022年，本集團向董事、中高層人員發送《廉潔提示函》，結合不同部門的業務性質和崗位特點講解費用報銷的紀律要求，組織員工觀看商業道德教育宣傳片及開展典型案例學習活動，通過多種渠道不斷推動商業道德文化建設。

6.1 供應鏈管理

- *供應商管理程序*

本集團以集成電路芯片設計為主營業務，而其主要供應商為集成電路芯片製造商。對供應商的有效管理可以幫助本集團在發展過程中降低成本、降低合作風險，提高產品及服務質量，建立良好品牌。為此，本集團制定了完善的供應商管理體系，涉及供應商引入及風險評估、定期評審、合作共贏等方面。

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Supplier management system 供應商管理體系

Supplier introduction and risk assessment 供應商引入及風險評估

Select qualified suppliers through procedures such as basic information assessment and on-site audit, etc. of potential suppliers.
通過對潛在供應商進行基本信息評估及現場審核等程序，選出合格供應商。

The Group also requires suppliers to provide environmental management system certification, RoHS (Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive) report, etc. according to customers' requirements.
本集團同時根據顧客要求，要求供應商提供環境管理體系認證證書、RoHS (《關於限制在電子電器設備中使用某些有害成分的指令》)報告等。

Periodic appraisal 定期評審

Annual appraisal of critical qualified suppliers is organised, mainly comprehensive appraisal on aspects such as quality and information safety, etc. and the cooperation with suppliers who do not meet the requirements will be canceled.
組織對重點合格供應商進行年度評審，主要從質量及信息安全等方面進行綜合評審，對於不符合要求的供應商將取消與其合作。

Win-win cooperation 合作共贏

Information safety related trainings and communications conducted with integrated circuit chips manufacturers and testing centres on a regular basis.
定期與集成電路芯片製造廠商、測試中心開展與信息安全相關的培訓與交流。

The Group formulated the Supplier Management Control Procedures setting out the requirements for the selection, appraisal and management for production suppliers. In particular, it sets out in detail the guiding principles for aspects such as selection, appraisal, daily management, and subsequent appraisal of suppliers, so as to ensure a long-term and stable provision of high quality and reliable products and services by the suppliers.

In addition, the Group formulated the Procurement and Outsourcing Control Procedures, setting out the requirements for the procedures and rules for managing the production procurement and the outsourcing. These procedures provide the definitions and corresponding operational requirements for aspects such as requirement planning, order formation and approval, procurement implementation, quality control, acceptance settlement, etc., so as to ensure the materials and products procured and outsourced comply with the requirements.

• Periodic appraisal of suppliers

The Group chooses to cooperate with suppliers which comply with the requirements of the laws and regulations in the People's Republic of China in aspects such as environmental and social risks appraisal. These suppliers also comply with the requirements of the Group's Key Factors of Inspection for the Assessment of Supplier Form regarding information safety management system and quality management system.

本集團制定了《供方管理控制程序》，規定了對生產類供應商的選擇、評審及管理的要求，其中詳細規定了供應商的選擇、評審、日常管理以及再評審等方面工作的指導原則，以確保供應商能夠長期、穩定的提供高質素可靠的產品及服務。

此外，本集團制定了《採購與外包控制程序》，規定了生產類採購及外包管理程序及規則。該程序對需求計劃，訂單形成及審批，採購實施，質量控制，以及入庫結算等方面做了定義及相應操作規定，以確保採購及外包的材料及產品符合要求。

• 供應商定期評審

本集團選擇合作的供應商在環境及社會風險評審方面均符合中華人民共和國法律及法規的要求，並且符合本集團《供方評估檢查要素表》中的信息安全管理體系及質量管理體系的規定。

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The Group carries out annual appraisal of its critical qualified suppliers. The appraisal of the qualified suppliers is based on criteria such as the availability of the supply of goods in the previous year, the requirement planning for the coming year, etc. Based on the results of the appraisal, the Group will adjust the eligibility and grading of suppliers accordingly and compile a revised list of qualified suppliers for the next year, while ad hoc two-party audits will also be conducted on suppliers as part of daily management. In the event that a qualified supplier has no business dealing with the Group for the past 3 consecutive years, the qualification of such supplier will be canceled. The Group conducted an appraisal of 44 suppliers in 2022, mainly focusing on the assessment of key factors such as suppliers' quality control system, information safety management system, procedure control and corporate management system. 42 suppliers were qualified in all aspects, and 2 suppliers were rejected due to application for change of requirements and failure to provide the required qualification certification respectively.

本集團每年對其重點合格供應商進行評審。本集團根據上一年度供貨情況、以及未來一年度需求計劃等準則，對合格供應商進行評審。根據評審結果，對供應商資格及等級進行調整，形成新一年的合格供應商名單，日常管理中還會對供應商進行不定期的二方審核。如果合格供應商連續3年與本集團沒有業務往來，其合格供應商資格將會被取消。本集團於2022年對44家供應商進行評審，主要針對供應商的品質管制體系、信息安全管理體系、程序控制及公司管理體系等要素進行評估。42家供應商各項資質均合格，2家供應商分別因提出變更申請及未能提供要求資質認證被剔除。

Statistics on supply chain management key performance indicators
供應鍊管理關鍵績效指標統計

Indicators	指標	2022 2022年度	2021 2021年度
Total number of suppliers	供應商總數(間)	65	61
By geographical region	按地區		
• Mainland China	• 中國內地	60	53
• Hong Kong, Macau, Taiwan and overseas	• 香港、澳門、台灣及海外	5	8

6.2 Anti-corruption

- *Anti-corruption management system*

The Group implements the building of corruption-free practice by adhering to the "Law abiding and establishing creditability, advocating integrity and nurturing people" integrity philosophy, insisting on the approach of "Treating both symptoms and root causes, applying punishment and prevention for impeachments and focusing on precaution".

6.2 反貪污

- *反貪污管理制度*

本集團秉承「奉法立信、興廉樹人」的廉潔理念，堅持「標本兼治、懲防並舉、預防為主」的方針，落實廉政建設。

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In order to regulate the gift accepting arrangement during business interactions on behalf of the Group, eradicate the possibility of violating laws and disciplines, strengthen employees' self-restraint and awareness of preventing corruption, the Group formulated the Handing Over of Gifts Collected Requirements (Provisional), and revised the "Significant issue, key official appointment and removal, significant project investment and large value fund utilisation" Decision-making System Implementation Measures and formulated a list of matters for research in 2022. In 2022, the Group organised integrity training for employee to learn about integrity systems such as the Business Entertainment in State-owned Enterprises Administration Regulations to enhance employees' awareness of integrity.

- *Complaint and whistleblowing management*

In order to regulate the management of complaints and whistleblowing reporting, the Group formulated the Complaints and Whistleblowing Management Measures. Employees of the Group and outsiders can report, in anonymity, corporates' or individuals' suspected misconduct relating to corruption, including bribery, extortion, fraud and money laundering, malpractice or irregularity during operations to either the internal audit department or the audit committee of the Company through letter, telephone, internet, facsimile, etc.

In addition, the Group keeps personal information of informers and whistleblowing cases strictly confidential in accordance with the confidentiality principle of the Complaints and Whistleblowing Management Measures.

為了規範本集團業務交往中的饋贈行為，杜絕可能發生的違法及違紀事件，增強員工的自我約束及防止腐敗的意識，本集團制定《禮品上繳規定（試行）》，並於2022年修訂《「三重一大」決策制度實施辦法》，制定了研究事項清單。本集團於2022年組織員工廉潔培訓，學習《國有企業商務招待管理規定》等廉潔制度，提升員工廉潔意識。

- *投訴及舉報管理*

為了規範投訴及舉報管理工作，本集團制定《投訴及舉報管理辦法》。本集團員工、外部人員均可匿名通過信件、電話、互聯網、傳真等渠道向內部審核部門或本公司的審核委員會反映企業或個人營運過程中有關貪污，包括賄賂、勒索、欺詐及洗黑錢的懷疑不當事宜、舞弊或違規情況。

此外，本集團按照《投訴及舉報管理辦法》的保密原則，對舉報人個人信息及舉報個案進行嚴格保密。

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7. ENVIRONMENT

The Group is committed to reducing the possible adverse impact of operations on the environment. The Group regularly reviews the environmental protection management measures in complying with operational location's laws and regulations relevant to environment such as the Environmental Protection Law of the People's Republic of China, encourages employees to take responsible actions on the environment and regularly provides employees with relevant training. In 2022, there was no environmental pollution incident, and no litigation against the Group and no violation of laws and regulations by the Group in relation to environmental protection.

7. 環境

本集團致力減低營運可能對環境造成的不利影響，遵守《中華人民共和國環境保護法》等與環境相關的營運地法律及法規，對環保管理措施定期進行檢討，鼓勵員工對環境採取負責任的行為，定期向員工提供相關培訓。本集團於2022年並沒有環境污染事件，及在環保方面並沒有訴訟及違法及違規事件。

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7.1 Green operations

The environmental impacts of the Group's operations mainly include the use of energy and water resources, and packaging materials used in finished products, as well as greenhouse gas emission. In response to the identified environmental impacts, the Group has formulated corresponding management measures.

7.1 綠色營運

本集團營運過程中造成的環境影響主要包括能源及水資源的使用和製成品所用包裝材料，以及溫室氣體排放方面。針對已識別的環境影響，本集團制定了相應的管理措施。

Aspects 層面	Green operation measures 綠色營運措施
1. Climate change and use of resources 1. 氣候變化及資源使用	<ul style="list-style-type: none">Strengthening low-carbon publicity and education to promote energy conservation philosophy. Water conservation and energy conservation measures, and recycling of packaging materials used in finished products during operations.加強低碳宣傳和教育，倡導節能理念。營運過程中的節水及節能措施、對製成品所用包裝材料進行循環使用。
2. Emissions 2. 排放物	<ul style="list-style-type: none">Measures to reduce greenhouse gas emission and office waste generated during operations.對營運過程中產生的溫室氣體排放及辦公廢棄物的減量化措施。
3. Incorporating environmental protection awareness 3. 環保意識融入	<ul style="list-style-type: none">Conducting environmental protection educational activities to help employees gain awareness of environmental protection and natural resources conservation.開展環保教育活動，幫助員工樹立環保與節約天然資源意識。

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• Climate change and use of energy

The Group's integrated circuits design operation does not involve manufacturing, and its four business operational locations are located in industrial parks or business centers of first-tier cities with well-developed infrastructure and facilities, so climate change has minimum impact on the Group's operations. However, in response to China's "Peak carbon dioxide emissions and carbon neutrality targets" and to reduce the Group's operating costs, the Group is also doing its best to promote the efficient use of resources and to reduce energy consumption (including electricity consumption and fuel consumption of vehicles for office use) during operations.

With regards to management system, the Group incorporated the resources conservation behaviors such as water conservation and energy conservation by employees into the Employee Daily Conduct Specifications, requiring them to turn off the lights when leaving work, turn off the water tap after use, have the computer under standby mode temporarily when not in use, turn off the monitor after use, turn off the electric power supply when leaving the office, etc. In addition, the Group formulated the Use of Company Vehicles Management Requirements, requiring the timely recording of the mileage and fuel consumption of company vehicles after use to reduce gasoline consumption through standardised management.

With regards to awareness publicity, the Group extensively conducted low-carbon publicity and education to its employees through activities such as low-carbon and energy conservation knowledge publicity, view collection on low-carbon and energy conservation and seminars on carbon neutralisation knowledge, promoting the energy conservation philosophy of "Low-carbon life, green building the future".

With regards to use of energy, Huada Electronics arranged for the cleaning and insulation pipe inspection of the VRV (variable refrigerant volume) air conditioners in its office building, so as to strengthen their work efficiencies and reduce energy consumption.

• 氣候變化及能源使用

本集團的集成電路設計業務不涉及製造環節，而其四個業務營運點均分佈在一線城市基建及配套完善的工業園區或商業中心，因此氣候變化對本集團的營運影響甚微。但是，為了響應中國「碳達峰、碳中和目標」，本集團亦盡己所能倡導資源的高效使用及竭力減少營運過程中的能源消耗（包括耗電及辦公用車的耗油），降低本集團的運營成本。

在管理制度方面，本集團將員工節水及節能等資源節約行為列入《員工日常行為規範》，要求員工做到人走燈滅，隨手關水龍頭，電腦暫時不用即進入待機狀態、隨手關閉顯示器、下班離開辦公室關閉電源等。此外，本集團制訂《公車使用管理規定》，要求使用車輛後及時記錄公車行使里程及油耗情況，通過規範化管理減少汽油消耗。

在意識宣傳方面，本集團通過低碳及節能知識宣傳、低碳及節能意見徵集及碳中和知識講座等活動，廣泛向其員工開展了低碳宣傳和教育，倡導「低碳生活，綠建未來」的節能理念。

在能源使用方面，華大電子對辦公大樓內的VRV（變製冷劑流量多聯式）空調進行清洗及保溫管排查等，加強其工作效率及降低能耗。

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- *Use of water resource*

As the Group's consumption of water resource mainly arises from operation of offices, and currently the Group's water source is municipal water supply, it is not facing any problem and risk in accessing sufficient water source. The Group took the initiative to promote the basic philosophy of water conservation to all employees by posting gentle reminders. The water taps will be repaired in a timely manner if it is found damaged, so as to reduce water resource wastage.

- *Packaging materials used in finished products and paper used in office*

Packaging materials used in finished products of the Group consists of cartons, black boxes, iron rings, stainless steel racks, etc. The Group recycles these black boxes, iron rings and stainless steel racks to the extent that the hygiene of such item is ensured, so as to reduce resources wastage.

The Group also established an office automation ("OA") system to implement paperless office. Aspects such as the receiving and sending of official documents, circulation of documents, sharing of departmental documents, etc. within members of the Group are all carried out through the OA system, so as to achieve paperless operation of office process. On the premise of protecting printing privacy, the Group implements double-sided printing, so as to reuse waste paper. In addition, the Group advocates bring-your-own-cup at internal meetings, so as to reduce the use of disposable paper cups.

- *水資源使用*

本集團對水資源的消耗主要來自於辦公營運，目前本集團取水來源為市政供水，不面臨求取適用水源方面的問題及風險。本集團通過張貼溫馨提示向全體員工倡導節約用水的基本理念，如發現水龍頭損壞及時修理，減少水資源浪費。

- *製成品所用包裝材料及辦公用紙*

本集團的製成品所用包裝材料主要包括紙箱、黑盒、鐵環及不銹鋼繃架等。其中，對於黑盒、鐵環及不銹鋼繃架，本集團在確保其清潔的情況下，進行循環使用，減少資源浪費。

本集團亦建立辦公自動化（「OA」）系統推行無紙化辦公，本集團成員公司間對於公文收發、文件流轉、部門文件共享等方面均通過OA系統實現辦公流程無紙化操作。本集團推行雙面打印紙張，在保障打印私隱的前提下重複利用廢棄紙張。此外，本集團內部會議提倡自帶水杯，減少一次性紙杯的使用。

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- Emissions

Apart from greenhouse gases and non-hazardous wastes produced in offices (such as waste paper), the Group does not produce significant exhaust emission, cause water and land pollutions, generate hazardous wastes and other environmental impacts during operations. The Group reduces greenhouse gas emission through electricity conservation. Non-hazardous wastes are dealt with by property management companies. The Group is unable to quantify its production. The Group also reduced the use of paper and waste paper produced through implementation of paperless processes. For old computers generated from office use, the Group shall pass them to a third party organisation for disposal in accordance with the Equipment Management and Control Procedures. The Group complies with the Prevention and Control of Environmental Pollution by Solid Waste Law of the People's Republic of China, improved the disposal method of waste toner cartridges by entrusting the printer suppliers to conduct unified recycling to reduce environmental pollution.

- 排放物

除溫室氣體及辦公環節產生的無害廢棄物（如廢紙等）外，本集團於營運過程中並無產生顯著廢氣排放、向水及土地排污、產生有害廢棄物以及其他環境影響。本集團通過節電減少溫室氣體排放。無害廢棄物均交由物業管理公司處理，本集團無法統計其產生量。本集團亦通過實施無紙化工作流程減少用紙以及廢紙產生。針對辦公環節產生的廢棄電腦，本集團按照《設備管理控制程序》，交由第三方機構進行處置。本集團遵守《中華人民共和國固體廢物污染環境防治法》，改善廢棄碳粉匣的處置方式，委託打印機供應商統一進行回收，以減少環境污染。

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Statistics on environment key performance indicators 環境關鍵績效指標統計

Indicators	指標	Units 單位	2022 2022年度	2021 2021年度	2024 target 2024年度目標
Total greenhouse gas emission ¹	總溫室氣體排放量 ¹	ton of CO ₂ equivalent 噸 CO ₂ 當量	1,512	1,132	
• Scope 1 greenhouse gas emission ²	• 範圍1溫室氣體排放量 ²	ton of CO ₂ equivalent 噸 CO ₂ 當量	13	23	
• Scope 2 greenhouse gas emission ³	• 範圍2溫室氣體排放量 ³	ton of CO ₂ equivalent 噸 CO ₂ 當量	1,499	1,109	
Greenhouse gas emission per square meter of floor area ⁴	每平方米樓面面積的溫室氣體排放量 ⁴	ton of CO ₂ equivalent/m ² 噸 CO ₂ 當量/平方米	0.09	0.09	0.09
Waste toner cartridges produced	廢棄碳粉匣產生量	number 個	69	66	109
Total electricity consumption ³	總耗電量 ³	MWh 兆瓦時	2,627	1,899	
Electricity consumption per square meter of floor area ³	每平方米樓面面積的耗電量 ³	kWh/m ² 千瓦時/平方米	177.88	144.59	95.51
Total water consumption	總耗水量	m ³ 立方米	8,929	9,884	
Water consumption per square meter of floor area	每平方米樓面面積的耗水量	m ³ /m ² 立方米/平方米	0.56	0.75	
Total fuel consumption ⁵	總耗油量 ⁵	litre 升	4,654	8,700	
Fuel consumption per capita ⁵	人均耗油量 ⁵	litre/capita 升/人	11.03	21.38	26.04
Volume of paper used in offices	辦公用紙量	ton 噸	1	1	
Volume of packaging materials used in finished products ⁶	製成品所用包裝材料量 ⁶	ton 噸	1	6	

Notes:

附註：

- The total greenhouse gas emission is the sum of Scope 1 and Scope 2 greenhouse gas emission.
- Scope 1 greenhouse gas emission is calculated based on vehicle fuel consumption data and related emission factors, and the calculation formula and emission factors are determined with reference to the Reporting Guidance on Environmental KPIs issued by The Stock Exchange of Hong Kong Limited.

- 總溫室氣體排放量為範圍1及範圍2溫室氣體排放量總和。
- 範圍1溫室氣體排放量根據汽車耗油數據及相關排放系數進行計算，計算公式及排放系數經參考香港聯合交易所有限公司發佈的《環境關鍵績效指標匯報指引》而釐定。

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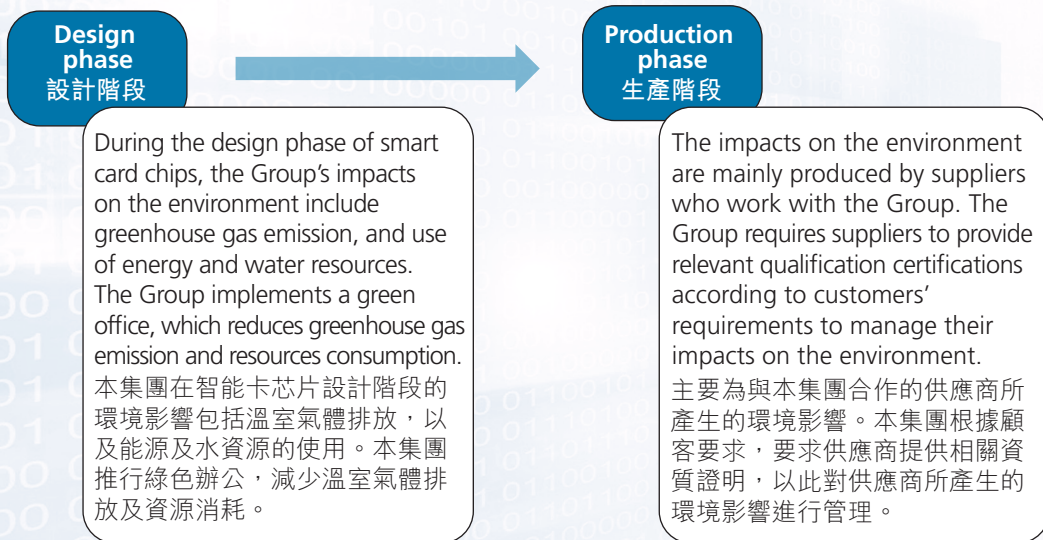
3. In 2022, the Group's sales volume has increased when comparing with 2021, and during the pandemic, the Group minimised the impact of the pandemic on the operations by telecommuting and the 24-hour operation of staff computers in the office area (due to security and confidentiality requirements, the vast majority of computers cannot be taken out of the office) and laboratory equipment, resulting in the total electricity consumption, the electricity consumption per square meter of floor area and the Scope 2 greenhouse gas emission for 2022 increased when comparing with 2021. Scope 2 greenhouse gas emission is calculated based on electricity consumption data and grid-based emission factors, and the grid-based emission factors of 0.5703 kg CO₂/kWh stated in the "Notice on Doing a Good Job in 2023-2025 Reporting Management of Greenhouse Gas Emissions for Power Generation Enterprises" issued by the Ministry of Ecology and Environment of the People's Republic of China has been used for the calculation in 2022.
4. The Group has achieved the 2024 target for greenhouse gas emission per square meter of floor area in 2021 and 2022. Due to the favourable development of the operations in recent years, the Group will take into account the current and forecast operation situation and expects to set a more appropriate environmental targets in 2023.
5. In 2022, the use of vehicles was reduced due to the impact of the pandemic, resulting in the total fuel consumption and the fuel consumption per capita for 2022 decreased when comparing with 2021.
6. In 2022, the Group revised the calculation of the volume of packaging materials used in finished products to exclude packaging materials used by outsourced processing suppliers, resulting in the volume of packaging materials used in finished products for 2022 decreased when comparing with 2021.
3. 2022年，本集團銷售量較2021年度有所上升，且在疫情期間，本集團通過遠程辦公的形式，最大程度降低疫情對業務的影響，辦公區內員工電腦（因安全和保密的要求，絕大部分電腦不可帶離辦公室）、實驗室設備等24小時運行，導致2022年度的總耗電量、每平方米樓面面積的耗電量、範圍2溫室氣體排放量較2021年度有所上升。範圍2溫室氣體排放量根據耗電量數據及電網排放系數進行計算，2022年度採用中華人民共和國生態環境局《關於做好2023-2025年發電行業企業溫室氣體排放報告管理有關工作的通知》發佈的電網排放系數0.5703kg CO₂/kWh進行計算。
4. 本集團2021年度及2022年度每平方米樓面面積的溫室氣體排放量已實現2024年度目標。由於近年業務的良好發展，本集團將綜合考慮目前及預計未來營運情況，預期在2023年訂立更合適的環境目標。
5. 2022年，受疫情影響，減少車輛使用，導致2022年度的總耗油量以及人均耗油量較2021年度有所下降。
6. 2022年，本集團修訂製成品所用包裝材料量計算方式，不包含委外加工供應商所用的包裝材料，導致2022年度的製成品所用包裝材料量較2021年度有所下降。

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7.2 Green products

The Group is principally engaged in the business of design of smart cards and security chips. Overall, despite smart card chips only accounting for a relatively small portion of the technological product, smart card chips are the core to driving the operation of the products, and good design can effectively reduce the impacts on the environment throughout the entire life cycle of the product.



The Group's products include smart card chips, modules, circuits and cards. All products meet the requirements of RoHS. In particular, the smart card chips, modules and circuits also meet the requirements of REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals).

In 2022, the Group replaced copper foil with a more environmentally-friendly raw material, namely environmentally-friendly copper, to meet the requirements of REACH standard, ensuring that raw materials, production processes and end products are free of arsenic to reduce the impact of production on the environment.

7.2 綠色產品

本集團的主營業務為智能卡及安全芯片之設計。智能卡芯片在科技產品整體來說佔比較小，但智能卡芯片是驅動產品運作的核心，良好的設計有利於減少產品整個生命週期對環境的影響。

本集團產品形態包括智能卡芯片、模塊、電路及卡片。所有產品均滿足RoHS要求，其中智能卡芯片、模塊及電路同時滿足REACH(《化學品的註冊、評估、授權和限制》)要求。

2022年，本集團採用更環保的原材料環保銅代替銅箔，滿足REACH標準要求，確保原材料、生產過程及終端產品不含砷，降低生產對環境的影響。

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8. COMMUNITY INVESTMENT

The Group strives to be an outstanding corporate citizen by focusing on community building, actively practicing corporate social responsibility, and continuously influencing employees and key stakeholders in this way.

In 2022, the Group invested RMB350,000 to a Village Revitalisation Special Fund organised by China Electronics Corporation Limited.

8. 社區投資

本集團關注社區建設，積極踐行企業社會責任，並以此不斷影響員工和重要利益相關方，致力於成為卓越的企業公民。

本集團於2022年投入人民幣350,000元至中國電子信息產業集團有限公司籌辦的鄉村振興專項基金。

Statistics on community investment key performance indicator 社區投資關鍵績效指標統計

Indicator	指標	Unit 單位	2022 2022年度	2021 2021年度
Investment in community welfare ¹	社區公益投資 ¹	RMB'000 人民幣千元	350	300

Note:

1. Excluding materials donated by the Group to various places in Inner Mongolia to help improve the living and education standards of the local people, and electronic equipment such as computers donated by the Group to the Disabled Persons Federation of Chicheng County, Zhangjiakou City, Hebei Province to support the disabled in online learning and working from home.

附註：

1. 不含本集團向內蒙古多地捐贈物資，協助改善當地人民的生活水平及教育水平；及向河北省張家口市赤城縣殘疾人聯合會捐贈電腦等電子設備，支持殘疾人士進行在線學習和居家辦公。

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