

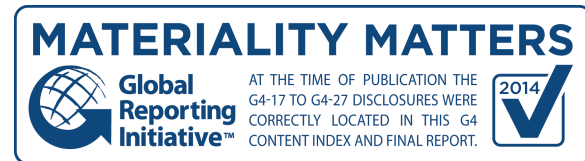


2012~2013 Corporate Social Responsibility Report

企業社會責任報告書



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1. 董事長的話

新唐科技與客戶及夥伴共同創新，帶動產業的發展，並持續為員工、股東及社會等創造價值，共享「創新的喜悅(joy of innovation)」；此外，我們關注永續經營議題，為使利害關係人更了解我們的作為，並具體承諾我們的企業社會責任願景，新唐科技於本年度正式推出 2012 年至 2013 年的企業社會責任報告書。

新唐科技承諾以「公平、公正、公義」原則對待所有利害關係人，維持良好的溝通，遵守國際及政府相關法令規定，以「永續經營」為目標，以「創新改善」為手段，來達成「安心、放心、同理心」的企業社會責任願景。新唐科技並提出以下 15 點聲明：

- 遵守相關之政府法令與國際規範。
- 廉潔經營，禁止賄賂、貪瀆、敲詐勒索及挪用公款行為。
- 不提供或接受不當利益，避免利益衝突。
- 重視公司治理，依法令規定公開公司資訊，不作虛偽表示。
- 遵守誠信原則，公平交易，不進行誇大不實的廣告行銷。
- 提供安全衛生健康的工作環境。
- 落實「海關與業者合作反恐守則」(C-TPAT)於日常營運作業。
- 遵循國際認可之勞工人權，不僱用未滿 15 歲之人員及非自願員工(包含強迫、抵押、抵債、契約束縛、受奴役及人口販賣)。
- 保障員工享有平等權益，無差別待遇。
- 禁止對員工(含潛在員工)騷擾、非法歧視、脅迫及不人道待遇。
- 重視環保生態，生產過程中不使用國際禁用物質。

1. From Chairman

Nuvoton Technology Corporation, along with our customers and partners, has been driving the development of the semiconductor industry through innovation, while continuing to generate value for employees, shareholders and communities. Together, we have been sharing “the joy of innovation”. Additionally, we regard corporate sustainability very seriously. To provide all our stakeholders with a better understanding of our business, as well as our firm commitment to achieving our vision for corporate social responsibility, Nuvoton is officially releasing our 2012 - 2013 Corporate Social Responsibility Report.

Nuvoton is committed to working with all of our stakeholders through the principles of “fairness, justice, and integrity”, while maintaining good channels of communication and complying with all international and domestic regulations. Under the mission of achieving “sustainable operations” and “improvement through innovation”, we seek to fulfill our corporate social responsibility vision of “providing a sense of safety, reassurance, and empathy”. To accomplish this, Nuvoton is dedicated to the following fifteen operating principles:

- Comply with all relevant government regulations and international norms.
- Ensure business integrity, and prohibit all acts of bribery, corruption, extortion, and embezzlement.
- Do not offer or accept improper benefits, and avoid conflicts of interest.
- Emphasize corporate governance, disclose company information in accordance with laws and regulations, and avoid being hypocritical.
- Comply with principles of good faith and fair trade. Do not conduct exaggerated/false advertising and marketing.
- Provide a safe and healthy working environment.
- Implement “Customs-Trade Partnership Against Terrorism (C-TPAT)” program guidelines in daily operations.
- Respect internationally-recognized labor principles and rights. Do not hire people under the ages of 15 or involuntary personnel (through coercion, mortgage, debt, indentured servitude, enslavement, or human trafficking).
- Ensure that all employees enjoy equal rights without discrimination.
- Do not harass, unlawfully discriminate, coerce, or inhumanely treat employees (including prospective employees).
- Stress the importance of ecological protection. Do not use internationally banned substances in any production processes.

- 確實遵守相關環境保護政策及法令。
- 尊重智慧財產權及保護與我們有業務往來者的個人資料。
- 要求供應商遵守相關法令並重視企業社會責任
- 不使用「衝突礦產」(該礦產來源為「剝削勞工」國家)並要求供應商也同樣遵守。

新唐科技為達成企業社會責任願景，在勞工人權、健康安全、環境保護、管理系統與道德規範各方面皆訂有完善標準，並據以實踐。

在勞工人權上，我們禁止對員工(含潛在員工)騷擾、非法歧視、脅迫及不人道待遇，此二年度皆未發生重大勞資爭議；在健康安全上，持續辦理健康促進活動，即早發現員工健康問題；在環境保護上，我們分別獲得環保署及新竹科學工業園區頒發「節能減碳行動標章」及「節能減碳優等獎」等獎項；在管理系統上，新唐科技訂有完整的內控機制，監督內部運作；道德責任上，禁止賄賂、貪瀆、敲詐勒索及挪用公款等行為，亦不參與政治活動，我們重視公司治理，以監察人監察公司運作；在營運績效上，我們以現金股利實質回饋股東。

新唐科技致力為半導體產業注入創新的能量。我們深信面對產業的瞬息萬變，唯有厚實之研發能量、掌握發展趨勢之洞察力，方能面對景氣循環之挑戰。新唐科技深懷企業社會責任，將綠能科技相關產品設為未來開發重點，我們本「永續經營」之初衷，持續實踐「安心、放心、同理心」的企業社會責任願景。 G4-1

- Comply with all relevant environmental protection regulations and laws.
- Respect intellectual property rights and protect the personal information of those who do business with us.
- Require suppliers to comply with all relevant laws while emphasizing corporate social responsibility.
- Do not use "conflict minerals" (minerals from countries that use "exploitative labor" practices) or suppliers who do so.

To achieve our corporate social responsibility vision, Nuvoton has been instituting comprehensive regulations regarding labor rights, health and safety, environmental protection, management systems, and professional ethics.

To uphold labor rights, we strictly prohibit all types of harassment, discrimination, coercion, and inhumane treatment against both current and prospective employees. In fact, over the last two years, there have been no major incidents involving labor disputes. Regarding health and safety, we regularly host health promoting activities and assist in the early detection of any health issues affecting our employees. Relating to environmental protection, we have been receiving recognition for our efforts with such awards as the "Green Mark of Action in Energy Conservation and Carbon Reduction" and "2012 Science Park Carbon Reduction Award" by the Environmental Protection Administration and Hsinchu Science Park, respectively. For management systems, we have been implementing comprehensive internal control mechanisms to monitor all of our internal operations. To uphold professional ethics, we prohibit all acts of bribery, corruption, extortion, and embezzlement, as well as refrain from participating in political activities. We place close attention to corporate governance, and appoint qualified supervising personnel to oversee company operations. In regards to our operating performance, we reward our shareholders with cash dividends.

Nuvoton is committed to infusing the semiconductor industry with innovative energy. In such a volatile industry, we strongly believe that only a solid capacity for research and development, and an acute insight into trends can prepare a company to withstand the challenges of boom and bust. Paying special attention to corporate social responsibility, Nuvoton has been positioning green energy technologies at the forefront of our future developments. With our original objective of achieving "sustainable operations", we shall continue to fulfill our corporate social responsibility vision of "providing a sense of safety, reassurance, and empathy". G4-1

2. 關於報告書

2.1 報告書說明

2.1.1 報告範圍

本報告書為新唐科技發行第一本企業社會責任報告書，資料期間為 2012 年 1 月 1 日至 2013 年 12 月 31 日，說明新唐科技在企業社會責任各範疇之作為與各項績效數據。本報告書之財務績效數據採合併報表，範圍包含全球子公司(含美國、以色列、中國大陸、香港)，其他範疇內容，如公司治理、環境保護與社會參與等之報告範圍為臺灣總部。 **G4-17**

2.1.2 報告書架構及綱領

本報告書的內容架構係依據利害關係人關注議題及新唐科技在報告期間的相關重大議題進行分析所擬定。我們以全球永續性報告組織最新發佈(Global Reporting Initiative, GRI)的 G4 核心綱領(GRI G4)作為依據，在本報告書附錄內容架構對照表供讀者比照參閱。

2.1.3 報告書發行說明

2012~2013 年企業社會責任報告書：2014 年 11 月發行

2014~2015 年企業社會責任報告書：預定 2016 年 11 月發行

為善盡企業公民責任，響應環保，本報告書以電子版本公告於公司網頁，同時發行繁體中文、英文版本。 **G4-28, G4-29, G4-30**

2. Overview

2.1 About the Report

2.1.1 Scope

This is the first corporate social responsibility (CSR) report released by Nuvoton Corporation. Covering the period from January 1, 2012 to December 31, 2013, this report explains the various aspects to Nuvoton's business and their performance in regards to fulfilling CSR. The financial data of this report is drawn from information listed in consolidated financial statements, which are inclusive of Nuvoton's global subsidiaries (including the United States, Israel, China, and Hong Kong). Other areas of the content, such as corporate finance, environmental protection, and social engagement, are specific for Nuvoton's headquarters in Taiwan. **G4-3, G4-17**

2.1.2 Framework and Guidance

The framework and guidance of this report are based on an analysis of concerns held by Nuvoton's stakeholders, as well as issues considered to be significant during the period covered by this report. We have prepared this report in accordance with GRI G4, the latest standards released by Global Reporting Initiative (GRI). The appendix contains a comparison table of the framework for readers to reference.

2.1.3 Release Notes

2012 - 2013 CSR Report: To be released in November 2014

2014 - 2015 CSR Report: Scheduled to be released in November 2016

To fulfill CSR in regards to environmental conservation, an electronic copy of this report will be published on the company website. Traditional Chinese and English versions of this report will be available. **G4-28, G4-29, G4-30**

2.1.4 報告書回饋方式

若您對本報告書之內容有任何建議，歡迎與我們聯繫。

聯絡方式：

地址：300 臺灣新竹科學工業園區研新 3 路 4 號

電話：+886-3-5770066 / 傳真：+886-3-5792525

電子郵件：CSR@nuvoton.com

公司網址：www.nuvoton.com G4-31

2.1.4 Feedback to the Report

We welcome your suggestions to the content of this report; please contact us at:

Address: No. 4, Creation Rd. Section III, Hsinchu Science Park, Taiwan

Telephone: +886-3-5770066 / Fax: +886-3-5792525

E-mail: CSR@nuvoton.com

Website: www.nuvoton.com G4-31



2.2 利害關係人界定

我們透過企業社會責任管理委員會下轄之功能委員會，定義本公司之利害關係人後，調查與蒐集利害關係人關注之議題，再分析公司現有之溝通管道與相對應之措施與成果。以下說明利害關係人關注議題之鑑別流程：

步驟1. 蒐集：依據企業社會責任管理委員會所定義之利害關係人並收集各功能委員會認定之相關利害關係人，依據全球永續性報告組織發佈之G4綱領，整合利害關係人類別、關注議題，據以擬定問卷調查之題目。

步驟2. 調查：進行問卷調查，各功能委員會選擇與其功能相關的利害關係人後，並以利害關係人角度評估其對各議題之關注程度；並選擇各議題對公司營運衝擊的程度。

步驟3. 分析：將選擇後的結果(對議題的關注程度與對營運的衝擊度)進行排序，進而鑑別出利害關係人關切議題之優先順序。

步驟4. 呈報：將分析結果提報至企業社會責任管理委員會，於取得企業社會責任管理委員會之核可後，本分析結果即為本次報告分析之架構，並依據此分析結果作為新唐科技未來改善的目標。 **G4-18**

2.2 Defining the Stakeholders

Through functional committees that are supervised by the Corporate Social Responsibility Management Committee, we investigated and collected topics of concern after first identifying the stakeholders of the company. Then, we analyzed the company's existing communication avenues, as well as the implementation and results of corresponding measures. The following describes the process for identifying the concerns of stakeholders:

Step 1. Collection: In accordance with the standards of GRI G4, we conducted surveys to organize and examine the concerns of various types of stakeholders, who were determined by the Corporate Social Responsibility Management Committee and recognized by the functional committees.

Step 2. Investigation: After the surveys were conducted, and each functional committee had selected stakeholders related to their respective functions, the degree of concern for each topic was assessed according to stakeholders' perspectives. Then, we determined the level of impact each topic has on the company's operations.

Step 3. Analysis: We sorted the results of the selection (degree of concern for the issues and their impact on business operations) before identifying and prioritizing topics of concern.

Step 4. Submission: After receiving approval from the Corporate Social Responsibility Management Committee, the results of the analysis laid the framework for this report. Furthermore, Nuvoton has based our goals for further improvement on the results of this analysis. **G4-18**

2.3 報告實質範圍界定

經企業社會責任管理委員會核定後，新唐科技利害關係人如下：員工、顧客、股東、董監事、供應商、政府、社區、媒體。

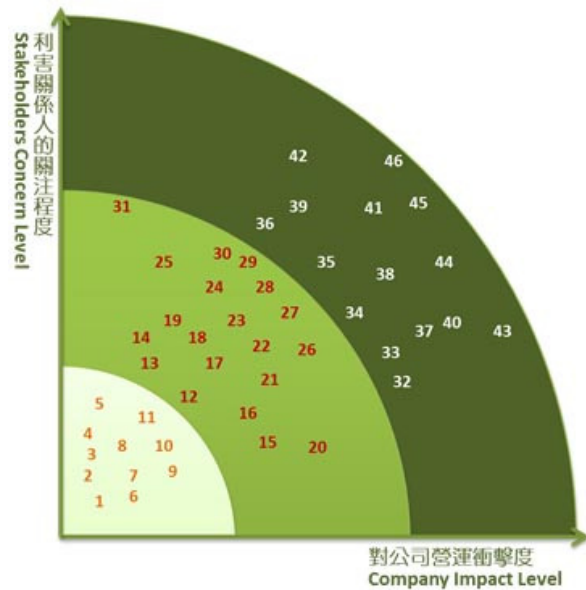
以利害關係人對議題的關注程度與該議題對公司營運衝擊的高低程度，由企業社會責任管理委員會下轄之各功能委員會進行鑑別，其分析結果顯示利害關係人的重要需求，我們依據鑑別結果進行顯著議題報告並據以規劃未來企業社會責任實踐內容。 G4-18, G4-19, G4-20, G4-21, G4-25

2.3 Defining the Boundary of the Report

With the approval of the Corporate Social Responsibility Management Committee, the stakeholders for Nuvoton have been identified as: employees, customers, shareholders, directors/supervisors, suppliers, the government, communities, and the media.

Under the supervision of the Corporate Social Responsibility Management Committee, each functional committee identified issues according to the level of concern of stakeholders and their impact on the company's operations. The results of the analysis revealed the important demands of stakeholders. We have prepared a notable issues report based on these identified results, and planned CSR practices in accordance with its content. G4-18, G4-19, G4-20, G4-21, G4-25

利害關係人關注議題重要性分析結果
Stakeholder Materiality Analysis



- 一般議題 General topics
- 次要議題 Medium topics
- 顯著議題 Significant topics

- | | | |
|--|---|--|
| <ul style="list-style-type: none"> 1. 供應商人權評估
Supplier Human Rights Assessment 2. 當地社區
Local Communities 3. 社會衝擊問題申訴機制
Grievance Mechanisms for Impacts on Society 4. 投資
Investment 5. 結社自由與集體談判
Freedom of Association and Collective Bargaining 6. 供應商社會衝擊評估
Supplier Assessment for Impacts on Society 7. 公共政策
Public Policy 8. 原住民權利
Indigenous Rights 9. 保全實務
Security Practices 10. 原物料
Materials 11. 評估
Assessment 12. 交通運輸
Transport 13. 間接經濟衝擊
Indirect Economic Impacts 14. 女男同酬
Equal Remuneration for Women and Men 15. 環境問題申訴機制
Environmental Grievance Mechanisms | <ul style="list-style-type: none"> 16. 供應商之環境評估
Supplier Environmental Assessment 17. 水資源
Water 18. 反貪腐
Anti-corruption 19. 童工
Child labor 20. 無歧視
Non-discrimination 21. 員工多元化與機會平等
Diversity and Equal Opportunity 22. 訓練與教育
Training and Education 23. 反競爭行為
Anti-competitive Behavior 24. 行銷溝通
Marketing Communication 25. 勞工實務問題申訴機制
Labor Practices Grievance Mechanisms 26. 能源
Energy 27. 生物多樣性
Biodiversity 28. 人權問題申訴機制
Human Rights Grievance Mechanisms 29. 供應商勞工實務評估
Supplier Assessment for Labor Practices 30. 產品和服務
Products and Services 31. 採購實務
Procurement Practices | <ul style="list-style-type: none"> 32. 經濟績效
Economic Performance 33. 市場形象
Market Presence 34. 排放
Emissions 35. 廢污水和廢棄物
Effluents and Waste 36. 環境 - 法規遵循
Environmental - Compliance 37. 整體環境情況
Environmental-Overall 38. 僱用關係
Employment 39. 勞資關係
Labor/Management Relations 40. 職業健康與安全
Occupational Health and Safety 41. 強迫與強制勞動
Occupational Health and Safety 42. 社會 - 法規遵循
Society - Compliance 43. 顧客健康與安全
Customer Health and Safety 44. 產品與服務標示
Product and Service Labeling 45. 顧客隱私
Customer Privacy 46. 產品責任 - 法規遵循
Product Responsibility - Compliance |
|--|---|--|

2.4 利害關係人溝通方式 Modes of Communications with the Stakeholders G4-24, G4-26, G4-27

利害關係人 Stakeholders	溝通管道 Channels of Communications	關注議題 Topics of Concerns	相關活動與重點 Related Activities and the Gravity
員工 Employees	<ul style="list-style-type: none"> 勞資會議 Labor-Management Meeting 主管季會 Executives Quarterly Meeting 主管經營智慧分享會 Executives Management Sharing Meeting 員工意見箱 Employee Complaint Box 職工福利委員會 Employee Welfare Committee 內部網站 Intranet 各組織不定期會議 Irregular Meetings within the Organizations 	<ul style="list-style-type: none"> 僱用關係 Employment 勞資關係 Labor/Management relations 職業健康與安全 Occupational Health and Safety 	<ul style="list-style-type: none"> 每季辦理勞資會議 / 季會 / 主管經營智慧分享會 / 職工福利委員會 Quarterly Labor-Management Meeting/Quarterly Meeting/Executive Management Sharing Meeting/Employee Welfare Committee
客戶 Customers	<ul style="list-style-type: none"> 客戶滿意度調查 Customer Satisfaction Survey 客戶稽核 Customer Audit 公司網站-會員專區 Company Website - Members Zone 	<ul style="list-style-type: none"> 顧客隱私 Customer Privacy 顧客之健康與安全 Customer Health and Safety 產品責任 - 法令遵循 Products Responsibility - Compliance 	<ul style="list-style-type: none"> 90%客戶在服務溝通給予滿意評價(4分以上)，75%客戶滿意所提供之技術支援 90% of the customers showed satisfaction in service and communications (scores of higher than 4), and 75% of customers are satisfied with the technical support we provided. 2013年完成「電子行業行為準則(EICC)」之有效性稽核程序評核結果達最高等級之綠色等級。 We completed the Validated Audit Process (VAP) on the "Electronic Industry Code of Conduct (EICC)", and the findings were ranked green, the highest grade.
股東 Shareholders	<ul style="list-style-type: none"> 股東會 General Shareholders' Meeting 法說會 Investor Conference 財務年報 Financial Annual Report 公司網站 Company Website 	<ul style="list-style-type: none"> 經濟績效 Economic Performance 市場形象 Market Presence 採購實務 Procurement Practices 	<ul style="list-style-type: none"> 每年辦理股東會 Annual General Shareholders' Meeting 每季辦理法說會，會後並上傳影音檔至公司網站 Quarterly investors conference with upload of audiovisual files to the company website

利害關係人 Stakeholders	溝通管道 Channels of Communications	關注議題 Topics of Concerns	相關活動與重點 Related Activities and the Gravity
董監事 Directors and supervisors	<ul style="list-style-type: none"> 董事會 Board of Directors 	<ul style="list-style-type: none"> 產品責任 - 法規遵循 Products Responsibility - Compliance 經濟績效 Economic Performance 環境 - 法令遵循 Environmental - compliance 	<ul style="list-style-type: none"> 每季辦理董監事會議 Quarterly Meeting of Directors and Supervisors
供應商 Suppliers	<ul style="list-style-type: none"> 供應商問卷調查 Questionnaire Survey on Suppliers 	<ul style="list-style-type: none"> 市場形象 Market Presence 採購實務 Procurement Practices 產品責任 - 法令遵循 Products Responsibility - Compliance 	<ul style="list-style-type: none"> 要求供應商一同重視與推動企業社會責任 Request suppliers to value and advocate corporate social responsibility
政府 Government	<ul style="list-style-type: none"> 公文 Official Notice 法規說明會 Legal Rules Conference 透過園區同業公會與主管機關溝通 Communication with the Competent Authorities through the Allied Association for Science Park Industries 	<ul style="list-style-type: none"> 法規遵循 Compliance 環境 - 法令遵循 Environmental - Compliance 廢汙水和廢棄物 Effluents and Waste 	<ul style="list-style-type: none"> 榮獲年度新竹科學工業園區進出口暨保稅業務優良單位，表現受公部門的肯定 Recognized as Excellent Manufacturer in Imports and Exports Business and Bonded Operations at Hsinchu Science Park
社區 Community	<ul style="list-style-type: none"> 公司網站 Company Website 電子郵件信箱 e-mail 	<ul style="list-style-type: none"> 廢汙水和廢棄物 Effluents and Waste 排放 Emissions 整體情況 Overall 	<ul style="list-style-type: none"> 本公司於報告期間，未有違法、罰款情事 No violation of laws and penalty during the reporting period
媒體 Media	<ul style="list-style-type: none"> 記者會 Press Conference 採訪 Interview 新聞稿 Press Release 公司網站 Company Website 	<ul style="list-style-type: none"> 市場形象 Market Presence 經濟績效 Economic Performance 行銷溝通 Marketing Communication 	<ul style="list-style-type: none"> 每月、每季定期發放新聞稿 Monthly and quarterly press releases 不定期安排媒體採訪 Arrange interview with the media at any time as needed

G4-24, G4-26, G4-27

3. 公司概況

3.1. 公司簡介

新唐科技成立的宗旨是為半導體產業帶來創新的解決方案。我們成立於2008年，同年7月受讓分割華邦電子邏輯IC事業單位正式展開營運，並於2010年在臺灣證券交易所正式上市掛牌。新唐科技專注於開發類比/混合訊號，微控制器及電腦雲端相關應用IC產品，相關產品在工業電子、消費電子及電腦市場皆具領先地位；此外，新唐科技擁有一座可提供客製化類比、電源管理及微控制器產品製程之晶圓廠，除負責生產自有IC產品外，另提供部份產能作為晶圓代工服務。

新唐科技以靈活之技術、先進之設計能力及數位類比整合技術能力提供客戶高性價比之產品。我們重視與客戶及合作夥伴的長期關係，致力於產品、製程及服務的不斷創新。新唐科技總部位於新竹，在美國、中國大陸、以色列等地均設有子公司，以強化地區性客戶支援服務與全球運籌管理。 **G4-3, G4-6, G4-7, G4-9, G4-13, G4-15**

3. About Nuvoton

3.1. Company Introduction

In 2008, Nuvoton was founded to provide innovative solutions for the semiconductor industry. In July of that year, it was spun-off from Winbond Electronics Corporation Logic IC business unit and officially launched its own operations. In 2010, Nuvoton became publicly listed on the Taiwan Stock Exchange. With a focus on the development of analog/mixed signal, microcontroller, and cloud computing-related IC products, the company holds a leading position in the industrial electronics, consumer electronics, and computer markets. Furthermore, Nuvoton owns a semiconductor foundry that provides customized processes for analog, power, and microcontroller products. Apart from its in-house IC products, Nuvoton also offers a part of its capacity for foundry services.

Nuvoton provides products with high performance/cost ratio for its customers by leveraging flexible technologies, advanced design capabilities, and the integration of digital/analog technologies. Nuvoton values long-term collaborative relationships with its customers and partners, and strives for continuous innovation in its products, processes, and customer services. Based in Hsinchu, Nuvoton also has subsidiaries in the U.S.A., China, and Israel to strengthen regional customer support and facilitate global operations management. **G4-3, G4-6, G4-7, G4-9, G4-13, G4-15**

3.1.1 2012年獎項與榮譽

2012年新唐科技微控制器產品之無線溫控器應用方案於「2012年中國全國優秀IC和電子產品解決方案評選」中，榮獲智慧終端與智慧家居方案類優秀方案獎，電腦IC亦再獲世界級品牌公司頒發「績優廠商獎」獎項，是我們長期投資在產品及服務研發的成果，亦是市場與客戶對於新唐科技產品及服務的實質肯定。此外，我們深感地球暖化對環境帶來的傷害，故長久以來推動節能減碳不遺餘力，2012年亦獲政府機關肯定，分別獲環保署及新竹科學工業園區頒發「節能減碳行動標章」及「節能減碳優等獎」等獎項。

3.1.2 2013年獎項與榮譽

2013年12月底完成「電子行業行為守則(EICC)」(The Electronic Industry Code of Conduct, EICC)之有效性稽核程序(Validated Audit Process, VAP)，評核結果達最高等級之綠色等級，顯示新唐科對於企業社會責任之重視，在勞工人權、健康安全、環境保護、管理系統與道德規範各方面皆訂有完善規範標準，並據以實踐。新唐科技並榮膺年度科學工業園區進出口暨保稅業務優良單位，表現受公部門的肯定。

3.1.1 Awards and Honors - 2012

In 2012, Nuvoton's wireless thermostat application for its microcontroller products won the "Best Solution Award" in the Smart Terminal and Smart Home Category of the 2012 China National Best IC and Electronic Product Solution Awards. Then, Nuvoton's personal computer IC was once again awarded with the "Best Supplier Award" by a global brand - the result of long-term investment in the R&D of products and services. These honors serve as further affirmations by the market and customers of Nuvoton's products and services. Furthermore, we have all deeply felt the harmful effects of global warming. In response, our efforts to promote energy efficiency and carbon reduction have never waned. In 2012, we were awarded the "Green Mark of Action in Energy Conservation and Carbon Reduction" and the "2012 Science Park Carbon Reduction Award" by the Environmental Protection Administration and Hsinchu Science Park, respectively.

3.1.2 Awards and Honors - 2013

In December of 2013, Nuvoton completed the Validated Audit Process (VAP) of the "Electronic Industry Code of Conduct (EICC)" and received the highest rating of green, demonstrating the importance we attach to CSR. After all, Nuvoton has been instituting and implementing comprehensive regulatory standards in regards to labor rights, health and safety, environmental protection, management system, and professional ethics. The company also received the "Award for Excellent Import/Export Trade and Bonding Business" from Hsinchu Science Park, serving as affirmation from the public sector.

3.2. 市場概況

新唐科技主要產品為一般IC，應用範圍多元，含括產品為微控制器(MCU)、微處理機(MPU)、音訊IC及電腦暨雲端應用IC，另擁有一座月產能四萬片的6吋晶圓製造廠，具備多樣性製程技術能力，提供專業化晶圓代工服務。主要產品、服務與市場概況如下：

3.2.1 主要產品與服務

3.2.1.1 一般 IC

新唐科技一般IC產品線主要包含微控制器(MCU)、微處理機(MPU)、音訊IC產品及電腦暨雲端應用IC產品。

MCU與MPU應用市場多元，我們的32位元通用型MCU採用ARM® Cortex®-M0與ARM® Cortex®-M4為核心，其目標市場包括工業應用、居家安全、冷氣空調、馬達控制、醫療電子、儀器儀表及USB裝置等；8位元MCU可應用領域則包括家電產品、資訊電子產品、工業電子產品、汽車電子產品等；32位元MPU採用ARM® 7與ARM® 9為核心，以Linux/WinCE為應用平台，著重人機控制介面、安防監控、無線音訊傳輸、多媒體傳收、網路管理與資料交換等應用。

音訊IC產品可應用於學齡前智力啟發型玩具與各式語音產品，以4位元/8位元與ARM® Cortex®-M0 MCU為核心，提供完整產品與性能組合。我們亦提供高整合音訊IC，除應用於汽車音響、醫療及工業市場的播放領域外，其友善的程式化介面便於客戶創造音響等級之數位播放語音警示和資訊服務。此外，尚提供可結合有線電話系統及個人緊急通訊系統、擴充基座(Docking Station)型應用及家用安全監控系統之音訊IC產品。

3.2 Market Outlook

General purpose IC remains the principal item of Nuvoton, but the scope of application is extensive, including microcontroller (MCU), microprocessor (MPU), audio IC, and IC for cloud computing application. In addition, the company also owns a 6" wafer fab with monthly production capacity for 40,000 pieces featured with a diversity of process capacity for foundry service. The principal items, services, and markets are described below:

3.2.1 Major Products and Services

3.2.1.1 General Purpose IC

The line of general purpose IC at Nuvoton includes MCU, MPU, audio IC, and IC for cloud computing application.

MCU and MPU are applicable to a diversity of markets. The general purpose 32-bit MCU with the ARM® Cortex®M0 and ARM® Cortex®-M4 as the core and the targeted markets are industrial application, home security, air-conditioning, motor control, medical electronics, instruments and panels, and USB devices. The 8-bit MCU is applicable to home appliances, information electronic products, industrial electronic products, and automobile electronic products. The 32-bit MPU is with MPU ARM® 7 and ARM® 9 as the core and Linux/WinCE as the application platform, with an emphasis on human-machine interface, security monitoring and control, wireless sound transmission, multimedia dissemination, network management, and data exchanges.

Audio IC is applicable to toys and voice products for the development of intelligence of preschool children, and is with the 4-bit/8-bit ARM® Cortex®-M0 MCU as the core that provided perfect integration of product and performance. The company also provides highly integrated audio IC applicable to automobile sound system, broadcasting system for the medical and industrial markets. The user-friendly program interface enables the customers easily create voice warning and information service of the digital broadcasting system at different levels of sound system. Furthermore, this product can also integrate with audio IC for fixed telephone system and personal emergency communication system, docking station, and home security monitoring and control system.

在電腦暨雲端應用IC產品方面，新唐科技提供在桌上型個人電腦(DT)上使用的超級輸出/輸入晶片(Super I/O)、電源控制晶片、風扇控制晶片；使用在筆記型電腦(NB)及一體型桌上型個人電腦(All in One PC, AIO)的鍵盤控制晶片(Embedded Controller, EC)、溫度電壓硬體監控晶片及電源管理晶片。另有在伺服器(Server)及資料中心(Data Center)上使用的遠端管理控制器(BMC)、電壓轉換器(Level Shifter)及其他相關IC。此外，我們與世界級電腦公司及OEM/ODM廠商合作開發特定應用晶片(ASSP)，可使用在個人電腦上。新唐科技亦配合提供這些晶片所需要之軟體及韌體，提供整體性服務，滿足客戶需求。

3.2.1.2 晶圓代工

新唐科技擁有一座先進的6吋晶圓廠，累積超過20年豐富的晶圓代工經驗，可提供長期穩定的產能、良好的品質及準確的交貨時程。製程方面，提供0.35um以上的晶圓代工製程，包括High-Voltage Power製程、Embedded Memory製程、Logic & Mixed Signal製程、Mask ROM製程及客製化製程。晶圓代工事業同時擁有測試廠、產品故障分析實驗室及製程技術開發團隊，為一提供整體性服務之專業晶圓代工廠，為客戶在市場競爭中不可或缺的夥伴。

3.2.2 產業概況

3.2.2.1 產業之現況與發展

3.2.2.1.1 一般IC

2013年全球終端消費市場在技術創新不斷的加快下，持續湧現新產品、新服務、新業態，且不斷刺激出新的消費。目前美國景氣持續加溫，而大陸及其它新興國家的需求雖然短期震盪，但中長期而言仍是成長最快速的一個區域，歐洲地區經濟也逐漸穩定。

In terms of IC products used for cloud computing applications, Nuvoton provides Super I/O, power control, and fan control chips. The company also produces embedded controllers, temperature and voltage monitoring chips, and power supply management controllers for NB and All in One PCs. For use in servers and data centers, it offers BMC, level shifter, and other related IC. Furthermore, we have partnered with world-class computer manufacturers and OEM/ODM vendors to develop application specific standard products (ASSP) for use in personal computers. By developing both the software and firmware needed for its IC products, Nuvoton offers a complete level of service to satisfy the needs of its customers.

3.2.1.2 Semiconductor Foundry

Nuvoton owns an advanced 6" semiconductor foundry. With more than 20 years of experience in wafer fabrication, the foundry continues to provide a long-term and stable production capacity, excellent product quality, and timely deliveries. In the manufacturing aspect, we provide foundry for wafers above 0.35um, including high-voltage power manufacturing, embedded memory manufacturing, logic and mixed signal manufacturing, and Mask ROM manufacturing and customizing. Our foundry industry - which simultaneously owns testing facilities, failure analysis laboratories, and process development teams - is a foundry fabrication plant that provides complete and thorough services, an indispensable partner for our clients who must compete in this market.

3.2.2 Industry Overview

3.2.2.1 Current Status and Development of the Industry

3.2.2.1.1 General Purpose IC

In 2013, along with an unimpeded acceleration of technological innovation, the global end-consumer market has seen many new products, services, and business types arise that all stimulate levels of consumption. Currently, the U.S. economy is warming up. Though China and other emerging countries are experiencing short-term slowdowns, they are still the fastest growing areas in regards to mid-to long-term prospects. Furthermore, the European economy is gradually stabilizing.

在MCU應用產品方面，32位元ARM® Cortex®-M0/M4仍是市場最關注的一個主架構，主因是產品具低功耗、高性能優勢。過去市場上的8位元MCU，由於先天核心架構的諸多限制，效能已無法滿足產品設計人員的要求，32位元MCU因此成為穿戴式裝置核心處理器的不二選擇，其中較具成長性的應用領域有智慧眼鏡、智慧手錶、運動、健康監測裝置、物聯網、無線充電、電機控制及指紋辨識等。IC Insights預估至2017年，32位元的MCU產品將占全球MCU市場達50%的比重；而在2012年至2017年間，MCU產值年複合成長率為10.1%，出貨量的年複合成長率約為4.8%，目前MCU仍是受到高度關注的一個產業。

近年來雲端運算的應用已逐漸成熟並擴散，從智慧型手機及平板電腦等行動裝置的持續發展，到巨量資料及智慧城市等領域的興起，均顯示本產業具有相當大的動能與未來發展空間。除了直接相關的資料中心、電腦伺服器、終端智慧裝置以及各式應用軟體均有顯著地成長，也間接帶動了網路通訊設備與相關工業電腦等產業一起向上，影響力持續擴大。

3.2.2.1.2 晶圓代工

根據市場研究調查機構IC Insights預測，2014年純晶圓代工產值可望達到412億美元，較2013年成長14%；2014年整體IC市場可望達到2,871億美元的規模，較2013年成長約7%。長期而言，2013年至2018年整體IC市場年複合成長率約6%，純晶圓代工產值年複合成長率可達到12%，而擁有晶圓廠之整合元件製造商(IDM)之年複合成長率則僅有3%。因此認為在未來幾年晶圓代工模式將以二位數的成長速度持續成長。

Concerning MCU application products, the 32-bit ARM® Cortex®-M0/M4 is still the hottest platform in the market now, largely owing to its low power consumption and high performance advantages. With many inherent limitations in its core framework, the 8-bit MCU is no longer able to fulfill the demands of product designers. 32-bit MCU have now become the prominent choice for core processors in wearable devices. Amongst them, the applications that possess the greatest long-term potential are smart glasses, smart watches, exercise and health monitors, Internet of Things, wireless charging, electric machinery controls, fingerprint identification, and more. IC Insights predicts that 32-bit MCU will have occupied 50% of the market share by 2017. In the years between 2012 and 2017, the compound annual growth rate of MCU gross industrial output value and volume will be 10.1% and 4.8%, respectively. Currently, the MCU industry is still the focus of much attention.

In recent years, cloud computing applications have been maturing and expanding. From continuous development in smart-phones, tablets, and other handheld devices to the rise of big data and smart cities, all indications point to a great momentum for the future development of this industry. Apart from directly-related data centers, computer servers, terminal devices, and various application software, the industry for network communication devices and related industrial computers has also flourished and continued to grow in influence.

3.2.2.1.2 Semiconductor Foundry

According to the market research institute, IC Insights, the gross output of the foundry industry alone is estimated to reach 41.2 billion USD by 2014 - a growth of 14% from 2013. The entire IC market is expected to reach a gross output of 287.1 billion USD by 2014 - a growth of 7% from 2013. In terms of long-term development, the compound annual growth rates from 2013 to 2018 of the entire IC market and foundry businesses alone are estimated to be approximately 6% and 12%, respectively. IDMs that have semiconductor foundries are expected to have a compound annual growth rate of 3%. Therefore, it is believed that the foundry model will continue to grow at a two-digit rate over the next few years.

中國IC設計產業產值由2010年225億人民幣逐年成長至2013年的743億人民幣，整體規模成長了三倍之多，挾地利與政策支援的優勢，此一成長力道將持續挺進，並可能於2014年超越臺灣，成為全世界第二大IC設計產業地區，排名僅次於美國。為持續發展暨開發全世界第二大IC設計市場，我們已積極佈局中國區之晶圓代工服務業務。

3.2.3 產業上、中、下游之關聯性

IC產業之上、中、下游關係大致可分為上游之IC設計公司、中游之IC晶圓製造廠及下游之IC封裝、測試廠。從供應鏈來看，IC產品設計完成後交付晶圓製造產出，IC在半導體產業供應鏈屬於下游成品，但對各式消費或工業產品則屬於上游零組件。以MCU產品為例，我們領先業界投入32位元MCU開發以滿足上游零組件終端客戶對高性能、低功耗、低成本的需求，各類應用市場如通信應用、汽車電子、各式小家電、醫療設備、家庭自動化、電源管理和智能電錶等；在雲端運算IC方面，我們下游的客戶則是以雲端運算應用、電腦伺服器、個人電腦、智慧型手持裝置、工業電腦及週邊產品等業者為主，我們在這些領域已持續深耕多年，跟領導廠商皆有深厚的夥伴關係，與上游業者亦建立了長期且穩定的合作模式。

From 2010 to 2013, the gross output of the IC design industry in China more than tripled from 22.5 to 74.3 billion RMB. With the advantages of location and governmental support, this force of growth will only continue to accelerate. By 2014, China may possibly surpass Taiwan and become the world's second largest IC design region, trailing only behind the U.S. To continue our research and development in the world's second largest IC design market, we have already been actively expanding our semiconductor foundry services in China.

3.2.3 Associations with Upstream, Midstream, and Downstream Industries

Within the IC industry, the upstream, midstream, and downstream industries can be roughly categorized as IC design houses, foundries, and assembly/testing facilities, respectively. From a supply chain perspective, IC products are first designed, then manufactured at foundries. They are considered to be finished products at the downstream of the semiconductor industry supply chain. However, for various consumer and industrial products, IC is considered to be upstream components. For example, we led the industry in developing 32-bit MCU to satisfy the high performance, low power consumption, and low cost demands of customers seeking upstream components for various market applications, such as communication applications, automobile electronics, small home appliances, medical equipment, home automation systems, and smart watches. Regarding cloud computing IC, our downstream customers are mainly involved in cloud computing applications, computer servers, personal computers, smart handheld devices, industrial PCs, and peripheral products. For many years now, we have been cultivating these professional fields by forging deep bonds with leading vendors and constructing long-term and stable collaborative models.

3.2.4 產品發展趨勢

3.2.4.1 一般 IC

MCU產品除了講求省電，還需具備高性能、低成本的元素，再者各類應用領域有其特殊周邊外設需求，並不能以單一產品滿足所有需求，故在MCU產品佈局上，針對不同應用市場領域，發展一系列全新寬電壓(1.8V~5.5V)及低功耗之產品線，以符合市場多元化應用需求，致力使產品朝向專用領域，期使客戶獲得最適、最佳性價比的產品。而MPU產品則廣泛應用於網路攝影機、HMI人機介面產品方面，未來發展趨勢朝向低電壓、性能提升、視聽功能高度整合和螢幕更大尺寸之高階系統單晶片。

此外，近年來各大雲端服務公司在全球快速且積極地布建資料中心，並跨過傳統伺服器供應商直接與ODM廠合作，此趨勢除了改變產業供應鏈關係，也改變了由傳統伺服器所定義出的研發架構。新的研發重點已朝向更快速的雲端傳輸、更低的能源消耗以及最佳的遠端管理能力邁進，並已跟各式通訊設備從上到下充分地結合，雲端運算IC的設計也依循此趨勢進行研發。

3.2.4.2 晶圓代工

近年來地球暖化加劇，加上天然資源的限制，促使綠色科技成為延續人類文明的關鍵，針對此一使命，新唐科技晶圓代工專注且致力於發展高效率之電源管理相關製程，以因應客戶於高效率電源轉換器、高效率電池管理、LED照明、太陽能及電動車等綠能相關市場。另外，我們也同時開發客製化感測器製程，以因應行動裝置、可攜式裝置及穿戴式裝置市場的龐大需求。

3.2.4. Product Development Trends

3.2.4.1 General Purpose IC

In addition to being energy efficiency, MCU products must also offer the features of high performance at low cost. Moreover, different fields of application have their own unique requirements for peripheral products. A single product cannot meet everyone's demands. Therefore, for our MCU product strategy, we have developed a new line of wide voltage range (1.8V~5.5V) and low energy consumption products according to the specific demands of different market applications. By meeting diverse market demands and steering our products to flourish in certain specialized fields, we hope to provide clients with the most suitable products and the highest performance/cost ratio. MCU products are being widely applied to web cams and human-machine interaction (HMI) products. The trend for their future development focuses on low voltage, high performance, and high-end single-chip systems for highly-integrated visual and auditory functions and larger screens.

Additionally, in recent years, various major cloud service providers have been actively and rapidly constructing data centers around the world, allowing them to bypass traditional server vendors and directly work with original design manufacturers (ODM). This trend has not only greatly changed the relationships of the industry supply chain, but it also changes the R&D framework defined by traditional servers. The new R&D focus lies in even faster cloud-based transmission, lower power consumption, and better remote management capacities all fully adapted to and compatible with various communication devices. Cloud computing IC designs closely follow this R&D trend.

3.2.4.2 Semiconductor Foundry

In recent years, the effects of global warming have intensified. Additionally, natural resources are limited. As a result, green technology has become a key component to the continuation of human civilization. In response to this imperative, Nuvoton's foundry is committed to the development of high-efficiency power management processes that correspond to customer demands in the green energy - related market- high efficiency power converters, high efficiency battery management, LED illumination, solar power, electric cars, etc. Concurrently, we are also developing customized sensor processes to respond to the vast demand in the mobile, portable, and wearable device markets.

3.2.5 產品競爭情形

3.2.5.1 一般 IC

為滿足設計人員對於MCU高效能、低成本的要求，現今各家MCU廠商皆不約而同朝向32位元MCU產品大步邁進。我們自2010年開始佈局32位元ARM® Cortex®-M0通用型MCU新產品，2012年開始導入32位元ARM® Cortex®-M4帶浮點運算與DSP功能全新高階MCU產品，搭配既有之8位元MCU，針對不同應用市場領域，發表全新MCU系列產品線，以完整產品線及優異的性價比挑戰國際大廠。因應科技產品高效能、高整合、低功耗需求，可預期32位元MCU未來應用市場成長動能將持續升高；而32位元ARM® 7/ARM® 9 MPU產品，雖然國內外競爭者衆，我們仍以高性價比之產品獲客戶的支持，此系列產品廣泛應用於網路攝影機、HMI人機介面、工業控制等聯網需求應用設備。

在雲端運算IC方面，我們主要產品為用於「雲」上的IMC智慧型控制器、硬體監控IC、訊號及電源轉換IC，以及用於「端」上的SIO、EC、安全晶片等。目前除了我們外，全球還有其他數家供應商，雖然競爭激烈，但仍維持一定秩序，我們以創新產品、優良品質及技術服務做為我們最主要的競爭利基。

3.2.5 Product Competitiveness

3.2.5.1 General Purpose IC

To meet the demands of designers for high performance and low cost, most MCU vendors have taken a large step in the direction of 32-bit MCU. In 2010, we began developing our new general purpose ARM® Cortex®-M0 MCU products. In 2012, we started to introduce brand new high level 32-bit ARM® Cortex®-M4 MCU products with floating-point arithmetic operations and DSP. Through this approach, we launched a brand new MCU product line tailored for different market applications. Offering a superior performance/cost ratio, this comprehensive product line served as a challenge to major global companies. Taking into account the demands for high performance, high integration, and low power consumption features in technological products, a continuous increase in momentum for 32-bit MCU market applications is to be expected. Despite the abundance in both international and domestic competitors, our 32-bit ARM® 7/ARM® 9 MPU products are still widely favored by clients due to their high performance/cost ratio. This series of product is widely applied in web cams, HMI products, industrial controls, and other devices needed for network operations.

Regarding cloud computing IC, our principal products are “cloud-based” IMC, hardware monitoring IC, signal and power converter IC, as well as “terminal-based” SIO, EC, and secure chips. Though the competition from around the world can be intense, a sense of order is always able to be maintained. Our competitive niche remains the same: innovative products and a high level of quality and technical services.

3.2.5.2 晶圓代工

新唐科技晶圓代工事業多年來專注於代工技術能力的提升及生產成本的最佳化。就技術方面而言，電源管理客製化製程已廣泛地應用在客戶各項電源管理產品上，如：高效能 LED Driver 及高效率電源轉換器等。就生產成本及彈性方面而言，我們以絕佳的生產彈性與生產成本，提供差異化且為客戶量身訂做的製程，以協助客戶提升競爭力；此外，令客戶滿意的晶圓代工服務品質，亦讓我們擁有絕佳的客戶關係。整體而言，與國內外業者相較之下，我們的晶圓代工事業以快速且完整的技術支援及服務彈性，提供無可取代的客製化製程，可因應快速變遷的市場，讓客戶於市場上更具競爭力。

G4-4, G4-8

3.3 營業機密保護

新唐科技與同仁簽訂聘僱合約時即已載明機密資訊保護相關規定，內容包含保護新唐科技、客戶之機密資訊，並保障新唐科技之相關智慧財產。新唐科技不定期地對同仁施以機密資訊保護之宣導及訓練，以協助同仁了解保密之重要。此外，新唐科技亦要求合作廠商簽署保密合約，並協助合作廠商認識新唐科技之機密管理制度，以達成合作廠商遵循新唐科技保密規定及進出辦公室規範之目的。 G4-PR8

3.2.5.2 Semiconductor Foundry

For many years, Nuvoton's foundry business has been paying close attention to the constant improvement of technical capacities and reduction of production costs. Regarding technique, customized processes for power management have been widely applied to various power management products, such as high performance LED Drivers and high efficiency power converters. With optimal levels of production flexibility and costs, we provide specially customized processes for each customer that help raise their level of competitiveness. Additionally, customer satisfaction with the quality of our foundry services has enabled us to develop close relationships with our customers. Compared to international and domestic competitors, our foundry business provides incomparable customized processes through fast yet comprehensive levels of technical support and service flexibility that help clients stay competitive in a rapidly changing market.

G4-4, G4-8

3.3 Protection of Trade Secrets

Nuvoton clearly states all relevant regulations and policies concerning the protection of classified information in employment contracts it signs with employees. These regulations cover the protection of classified information of both Nuvoton and its customers, and the safeguarding of Nuvoton's intellectual properties. Nuvoton irregularly provides guidance and training for its employees regarding the protection of classified information to ensure that they are fully aware of its importance. Furthermore, Nuvoton also requests all collaborating vendors to sign a confidentiality agreement, while helping them learn about its confidential information management system. Through this approach, Nuvoton is able to ensure that collaborating vendors abide by its confidentiality regulations and policies for both inside and outside the office. G4-PR8

3.4 協會(公會)之會員身分

新唐科技積極參與產業公會與協會的活動，在為數眾多的公會及協會當中，我們參加了台灣科學工業園區科學工業同業公會、台灣區電機電子同業公會、台北市電腦商業同業公會、台灣車載資通訊產業聯盟及台灣汽車電子產業聯盟等組織。此外，新唐科技部分同仁也依其負責之業務屬性，分別於各公會或協會組織中擔任各委員會之委員職務，為產業的發展貢獻心力。 G4-16

3.5 對投資人的責任

新唐科技本著創新之經營方針，致力於開發新應用領域，擴大並強化公司於產能及技術；新唐科技的經營管理策略及財務政策一向以維護及增加長期投資人的投資價值為目標。自2010年本公司上市以來，每年透過股利的發放、維持穩健的財務結構，持續不斷地為投資人創造價值。

為了能以最快的方式將公司重大資訊傳遞給投資人，我們每季舉行法人說明會，為了強化與投資人的溝通，幫助投資人了解公司每季財務數字及營運狀況，在法人說明會結束後，我們亦將法人說明會影音檔存放於公司網站上供投資人參考；公司主要活動及重要的事件亦於公司網站刊載。 G4-15

3.4 Association (Guild) Membership

Nuvoton actively participates in industry association and guild activities. Of these numerous organizations, Nuvoton is a member of The Allied Association for Science Park Industries, Taiwan Electrical and Electronics Manufacturers' Association, Taipei Computer Association, and Taiwan Telematic Industry Association. Moreover, according to the nature of their business responsibilities, some of Nuvoton's personnel even serve as committee members for these associations and guilds to contribute to the overall development of the industry.

G4-16

3.5 Responsibility to Our Investors

With innovation as the foundation for its operational guidelines, Nuvoton is committed to the development of new fields of application, and the expansion and strengthening of the company's capacities and technologies. Nuvoton's operational strategies and financial policies have always been focused on the protection and increase of investment value for our long-term investors. Every year since Nuvoton became publicly listed in 2010, we has been continuously creating value for its investors through dividend payouts and the maintenance of a stable financial structure.

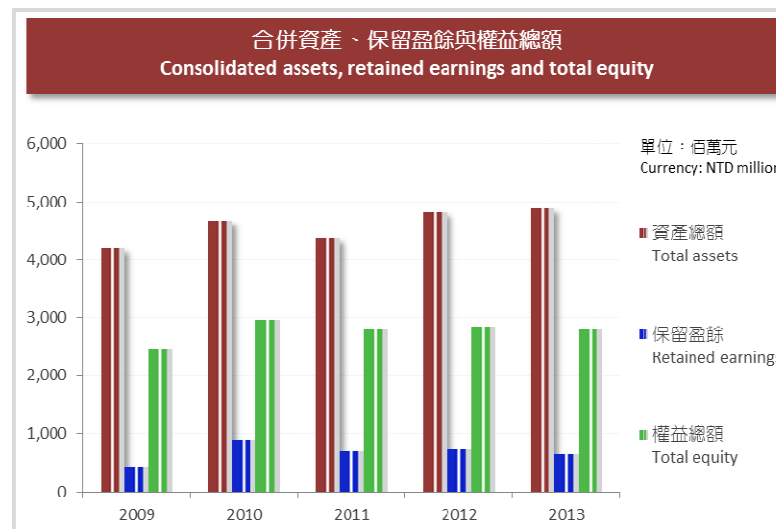
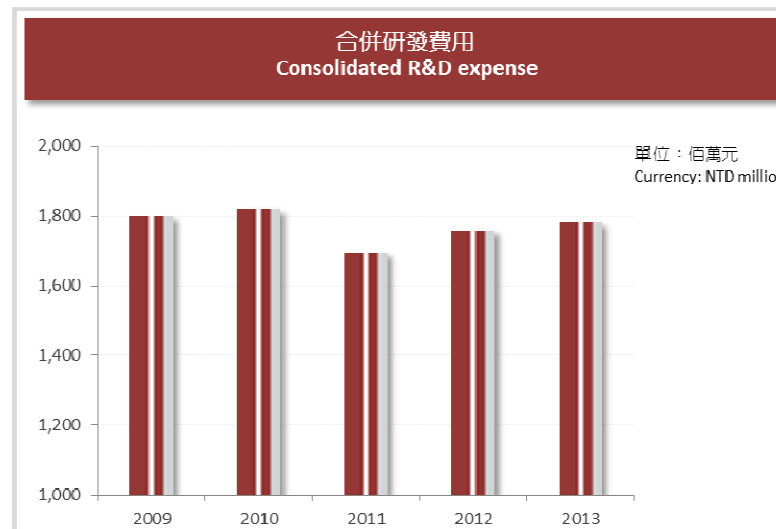
To quickly share material information with our investors, we host investor conferences every quarter to enhance communication and help them fully understand our quarterly financial figures and business condition. After the event, video recordings of the conference are uploaded to our website to serve as reference. Additionally, information on major company activities and important events are also available on the company website for viewing. G4-15

3.6 財務績效

新唐科技於2013及2014年度分別配發前一年度盈餘，此二年每股普通股分別配發現金股利1.7及1.2元。新唐科技2012年及2013年每股普通股盈餘分別為3.03元及1.25元。 G4-9, G4-EC1

3.6 Financial Performance

For both 2013 and 2014, Nuvoton allocated earnings from the previous year. For these two years, the earnings per share was 1.7 NTD and 1.2 NTD, respectively. For 2012 and 2013, the earnings per share was 3.03 NTD and 1.25 NTD, respectively. G4-9, G4-EC1

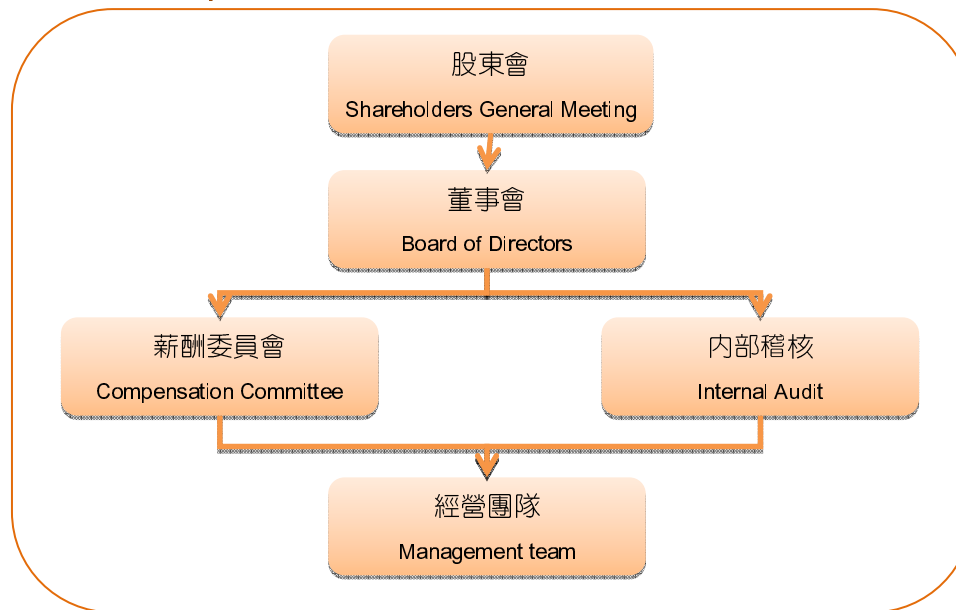


4. 公司治理

4. Corporate Governance

4.1 公司治理架構

Corporate Governance Framework G4-34



4.2 董事會

4.2 Board of Directors

4.2.1 董事會組織

4.2.1 Organization of the Board of Directors

新唐科技之董事會由十二位擁有專業背景與技術經驗的董事、監察人所組成，我們倚重董事們的豐富學識、個人洞察力和商業判斷力，擔負公司營運及監督之責。於2013年改選完成之董事會設有九席董事(含三席獨立董事)及三席監察人，非屬公司經理人之董事超過董事席次一半以上，以強化公司治理之架構，其成員分列如下：

Nuvoton' Corporation's board of directors is comprised of twelve directors and supervisors with professional backgrounds and technical experience. We rely on the knowledge, personal insight, and business acumen of each director in assuming responsibility for the operation and supervision of the company. After re-election of the board in 2013, there are now nine directors (including three independent directors) and three supervisors. More than half of the directors are not manager-level personnel from the company, which helps strengthen the framework of corporate governance. The members are as follows:

職稱 Title	姓名 Name	目前兼任本公司及其他公司之職務 Positions in the Company and Other Companies
董事長 Chairman	華邦電子(股)公司 代表人：焦佑鈞 Representative of Winbond Electronics Corp.: Arthur Yu-Cheng Chiao	本公司董事長 華邦電子(股)公司、凌耀科技(股)公司、金鑫投資(股)公司董事長 華新麗華(股)公司副董事長 華新麗華控股有限公司、華新特殊鋼控股有限公司、華新科技(股)公司、聯亞科技(股)公司、金澄建設(股)公司、Winbond Electronics Corp. America、Landmark Group Holdings Ltd.、Winbond Int'l Corp.、Newfound Asian Corp.、Peaceful River Corp.、Baystar Holdings Ltd.、Nuvoton Investment Holding Ltd.、Marketplace Management Limited、Pigeon Creek Holding Co., Ltd. 董事 台灣水泥(股)公司、聯強國際(股)公司獨立董事；Goldbond LLC 經理人；神達投資控股(股)公司監察人 Chairman of Nuvoton; Chairman of Winbond Electronics Corp., Capella Microsystems Inc., and Chin Xin Investment Co., Ltd.; Vice chairman, Walsin Lihwa Corporation; Director, Walsin Lihwa Holding Co., Ltd.; Concord Industries Ltd., Walsin Technology Corp., United Industrial Gases Co., Ltd, Jin Cheng Construction Corporation, Winbond Electronics Corp. America, Landmark Group Holdings Ltd., Winbond Int'l Corp., Newfound Asian Corp., Peaceful River Corp., Baystar Holdings Ltd., Nuvoton Investment Holding Ltd., Marketplace Management Limited, Pigeon Creek Holding Co., Ltd.; Independent Director, Taiwan Cement Corporation, Synnex Technology International Corporation; Manager, Goldbond LLC ,Supervisor, MiTAC Investment Holding Co., Ltd.
董事 Director	徐英士 Robert Hsu	本公司總經理 華邦電子(股)公司、Winbond Int'l Corp., Landmark Group Holdings Ltd., Winbond Electronics Corporation Japan, Baystar Holdings Ltd., 芯唐電子科技(深圳)有限公司, Nuvoton Corp. America, Nuvoton Israel Ltd., Nuvoton Investment Holding Ltd., Marketplace Management Limited, Pigeon Creek Holding Co., Ltd. 董事 President of Nuvoton; Director, Winbond Electronics Corporation, Winbond Int'l Corp., Landmark Group Holdings Ltd., Winbond Electronics Corporation Japan, Baystar Holdings Ltd., Nuvoton Electronics Technology (Shengzhen) Ltd., Nuvoton Corp. America, Nuvoton Israel Ltd., Nuvoton Investment Holding Ltd., Marketplace Management Limited, Pigeon Creek Holding Co., Ltd.
董事 Director	華邦電子(股)公司 代表人：盧克修 Winbond Electronics Corp. Representative: Ken-Shew Lu	Diodes Incorporated 總裁、執行長及董事 LedEngin 董事長；Lorenze、光寶科技(股)公司董事 President, CEO and Director, Diodes Inc. Chairman, LedEngin ;Director, Lorenze, LiteOn Technology Corp.
董事 Director	華邦電子(股)公司 代表人：靳蓉 Winbond Electronics Corp.; Representative: Yung Chin	華邦電子(股)公司、華邦電子(香港)公司、Winbond Electronics Corp. America、松智控股有限公司、Newfound Asian Corp.、Peaceful River Corp.、芯唐電子科技(香港)有限公司董事；慶安投資(股)公司、佑祥投資(股)公司、Winbond Electronics Corporation Japan、華邦集成(蘇州)有限公司、芯唐電子科技(上海)有限公司監察人 Director, Winbond Electronics Corp, Winbond Electronics (HK) Ltd, Winbond Electronics Corp. America, Sung Chi Holding Co., Ltd., Newfound Asian Corp, Peaceful River Corp., Nuvoton Electronics Technology (HK) Ltd., Supervisor, Ching An Investment Co., Ltd., You Hsiang Investment Co., Ltd., Winbond Electronics Corporation Japan, Winbond Electronics (Suzhou) Co., Ltd., Nuvoton Electronics Technology (Shanghai) Ltd.

職稱 Title	姓名 Name	目前兼任本公司及其他公司之職務 Positions in the Company and Other Companies
董事 Director	魏啓林 Wei Chi-Lin	康舒科技(股)公司董事；無敵科技(股)公司、信邦電子(股)公司、臺灣塑膠工業(股)公司獨立董事 Director, AcBel Polytech Inc., Independent Director, Inventec Besta Co., Ltd., Sinbond Electronics Co., Ltd., Formosa Plastics Corporation.
董事 Director	程有威 Gary Y. Cheng	凌耀科技(股)公司監察人 Supervisor, Capella Microsystems Inc.,
獨立董事 Independent Director	徐善可 Allen Hsu	事欣科技(股)公司、順昶塑膠(股)公司、宜鼎國際(股)公司董事；澳盛(臺灣)商業銀行(股)公司、微邦科技(股)公司獨立董事 越峰電子材料(股)公司監察人 Director, Pilot Electronics Corporation, Swanson Plastics Corporation, Innodisk Corporation, ANZ Bank (Taiwan) Ltd., Independent Director, Microbase Technology Corporation, Supervisor, Acme Electronics Corporation.
獨立董事 Independent Director	洪裕鈞 Royce Yu-Chun Hong	愛比科技(股)公司董事長及總經理；隆鈞投資(股)公司、臺灣松下電器(股)公司、安潤科技(股)公司、經世顧問(股)公司董事 裕基創業投資(股)公司、國際電化商品(股)公司、十一事務(股)公司監察人 Chairman and President, IPVEO Corporation, Director, Lung Chun Investment Co., Ltd., Panasonic Taiwan Co., Ltd., Amroad Technology Inc., Chili Consulting Co., Ltd., Supervisor, Yu Chi Venture Capital Co., Ltd, National Electric Appliance Co., Ltd., Xrange Co., Ltd
獨立董事 Independent Director	黃峻樑 Hunang Chun-Liang	瑞聖雅投資(股)公司董事長；圓展科技(股)公司獨立董事 Chairman, Ray Sheng Ya Investment Co., Ltd. Independent Director, Aver Information Inc.,
監察人 Supervisor	許祿寶 Hsu Lu-Pao	華邦電子(股)公司董事；Diodes Incorporated 獨立董事 Director of Winbond Electronics Corp., Independent Director of Diodes Inc.
監察人 Supervisor	孟昭明 Meng Chao-Ming	中華開發金融控股公司副總經理；華開租賃(股)公司董事長；中華開發管理顧問(股)公司董事 Vice general manager, China Development Financial Holding Corp., Chairman, CDC Finance and Leasing Corp. Director, CDIB Management Consulting Corp.
監察人 Supervisor	金鑫投資(股)公司 代表人：賴陽坤 Chin Xin Investment Co., Ltd. Representative: Lai Yang-Kun	無 None.

資料日期：2013年12月31日

Updated information as of: December 31, 2013

4.2.2 董事會職責

新唐科技董事會負責公司的經營方針及長、短程發展計劃；年度業務計劃、預算之審議與監督執行。董事會首要責任是監督公司守法、財務透明、即時揭露重要訊息、沒有內部貪污等情事。為了善盡監督責任，董事會建立了各式組織與管道，例如：薪酬委員會、內部稽核等。

董事會的第二個責任是指導經營團隊。董事會每季定期聽取經營團隊的報告，經營階層必須對董事會提報公司策略，董事會必須判斷這些策略成功的可能性，也必須檢視策略的進展，並且在需要時敦促經營團隊作調整。

董事會的第三個責任，是評量經營團隊之績效及任免經理人。本公司經營階層與董事會之間維持著順暢良好的溝通，專心致力於執行董事會的指示與業務營運，以為股東創造最高利益。

4.2.3 薪酬委員會

薪酬委員會成員係由董事會任命，本委員會之職能，係以專業客觀之地位，就本公司董事、監察人及經理人之薪資報酬政策及制度予以評估，並向董事會提出建議，以供其決策之參考。

依本公司「薪資報酬委員會組織規程」規定，本委員會成員人數不得少於三人，本公司薪酬委員由三位獨立董事組成，薪酬委員會至少每半年召開一次常會，薪酬委員會組織章程亦刊載於本公司網站。

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4.2.2 Board Member Responsibilities

Nuvoton's board of directors is responsible for defining the company's operating principles, long-term and short-term plans for development, and annual business plan, as well as approving budgets and supervising the execution of company policies. The board's primary responsibility is to monitor compliance, financial transparency, the immediate reveal of important information, internal corruption, and other such areas. To fulfill its oversight responsibilities, the board has established a variety of organizations and avenues, such as a compensation committee and internal auditors.

The second responsibility of the board is to provide guidance for the management team. The board regularly listens to the management team's quarterly report. Management-level employees must report company strategies to the board, and the board must determine their likelihood of success. Furthermore, the board must examine the progress in implementing policies, and urge the management team to make adjustments when necessary.

The third responsibility of the board is to assess the performance of the management team and appoint or dismiss managers. The company maintains a productive channel of communication between management-level employees and the board of directors. By executing business operations according to the board's instructions, Nuvoton is able to act in the best interests of shareholders.

4.2.3 Compensation Committee

Members of the Compensation Committee are appointed by the board of directors. Through a professional and objective perspective, this committee assesses the level of compensation for directors, supervisors, and managers of the company according to defined policies and systems, and makes recommendations to the board to serve as reference for its decisions.

According to the "Compensation Committee Charter", the committee must be comprised of three or more members. Currently comprised of three independent directors, the company's Compensation Committee holds a general meeting at least once every six months. The committee's articles of association are published on the company's website.

G4-14

4.3 道德規範與從業行為

4.3.1 道德價值之遵循

新唐科技為履行社會責任，承諾秉持最高標準的道德要求公司成員所從事之所有業務活動，並致力要求供應商共同遵守。

新唐科技企業社會責任行為準則訂有從業道德規範(以下稱「本規範」)，要求新唐科技每一位同仁都應遵循最高的誠信標準並遵守法令規定，相關政策聲明如下：

- 遵守相關之政府法令與國際規範。
- 廉潔經營，禁止賄賂、貪瀆、敲詐勒索及挪用公款行為。
- 不提供或接受不當利益，避免利益衝突。
- 重視公司治理，依法令規定公開公司資訊，不作虛偽表示。
- 遵守誠信原則，公平交易，不進行誇大不實的廣告行銷。
- 提供安全衛生健康的工作環境。
- 落實「海關與業者合作反恐守則」(C-TPAT) 於日常營運作業。
- 遵循國際認可之勞工人權，不僱用未滿15歲之人員及非自願員工(包含強迫、抵押、抵債、契約束縛、受奴役及人口販賣)。
- 保障員工享有平等權益，無差別待遇。
- 禁止對員工(含潛在員工)騷擾、非法歧視、脅迫及不人道待遇。
- 重視環保生態，生產過程中不使用國際禁用物質。
- 確實遵守相關環境保護政策及法令。
- 尊重智慧財產權及保護與我們有業務往來者的個人資料。
- 要求供應商遵守相關法令並重視企業社會責任。
- 不使用「衝突礦產」(該礦產來源為「剝削勞工」國家)並要求供應商也同樣遵守。

4.3 Code of Ethics and Business Conduct

4.3.1 Abiding by Moral Values

To fulfill the social responsibilities, Nuvoton is committed to requiring all its employees to uphold the highest ethical standards when engaging in any business activity. Furthermore, Nuvoton also requires its suppliers to abide by the same standards.

Under Nuvoton's CSR Code of Conduct, Ethical Business Conduct Guidelines (hereinafter referred to as "Guidelines") are defined that require all employees of Nuvoton to abide by the highest standards of integrity, and to ensure compliance with all laws and regulations. The guidelines are as follows:

- Comply with all relevant government regulations and international norms.
- Ensure business integrity, and prohibit all acts of bribery, corruption, extortion, and embezzlement.
- Do not offer or accept improper benefits, and avoid conflicts of interest.
- Emphasize corporate governance, disclose company information in accordance with laws and regulations, and avoid being hypocritical.
- Comply with principles of good faith and fair trade. Do not conduct exaggerated/false advertising and marketing.
- Provide a safe and healthy working environment.
- Implement "Customs-Trade Partnership Against Terrorism (C-TPAT)" program guidelines in daily operations.
- Respect internationally-recognized labor principles and rights. Do not hire people under the ages of 15 or involuntary personnel (through coercion, mortgage, debt, indentured servitude, enslavement, or human trafficking).
- Ensure that all employees enjoy equal rights without discrimination.
- Do not harass, unlawfully discriminate, coerce, or inhumanely treat employees (including prospective employees).
- Stress the importance of ecological protection. Do not use internationally banned substances in any production processes.
- Comply with all relevant environmental protection regulations and laws.
- Respect intellectual property rights and protect the personal information of those who do business with us.
- Require suppliers to comply with all relevant laws while emphasizing corporate social responsibility.
- Do not use "conflict minerals" (minerals from countries that use "exploitative labor" practices) or suppliers who do so.

4.3.2 從業行為之管理

公司所有同仁、經理人及主管均必須遵守本聲明及相關辦法之規定。我們亦期盼客戶、供應商、承攬商、顧問及其他與本公司有契約關係者了解並尊重新唐科技的從業道德規範及文化。

公司内部稽核藉由審閱、覆核公司内部控制制度是否充分與有效，以協助董事會及管理階層，確保下述事項：

- 公司資訊之正確性、可靠性與即時性，包含財務、管理與營運資訊。
- 公司與員工遵循相關之政策、準則、程序與法規。
- 影響公司之相關法規內部皆已經辨識且進行回應。

公司之年度稽核計劃提報予董事會並取得其核准；並於完成稽核後呈報管理階層及董事會相關之稽核結果與後續改善進度。

新唐科技以最高標準的道德要求從事所有業務活動，不允許員工出現違反相關規範之行為，當員工出現違反規範行為，將根據公司相關辦法議處，包含記過、開除與採取法律行動等。為協助同仁內化公司之道德規範，我們架設內部企業社會責任網站供同仁隨時查詢，提供說明，另提供雲端課程，幫助同仁了解公司之企業社會責任與道德規範。

G4-15, G4-56

4.3.2 Managing Business Conduct

All employees, managers, and executives of the company must comply with the provisions of this declaration and all other related measures. We also look forward to letting our customers, suppliers, contract manufacturers, consultants, and others who have contractual relationships with our company gain a deeper understanding into the ethical business conduct and culture of Nuvoton.

Reviews by the company's internal audit control system regarding issues of adequacy and efficiency are able to assist the board of directors and management team in ensuring the following matters:

- The accuracy, reliability, and timeliness of company information, including financial, management, and operational data.
- Compliance with relevant policies, guidelines, procedures and regulations by the company and its employees.
- Identification and response to relevant regulations affecting the company.

The company's annual audit plan is to be provided to the board for approval. Upon completion of the audit, all results relevant to management and the board, as well as all subsequent progress should be reported.

Nuvoton upholds the highest ethical standards in all its business activities. The company does not ever authorize employees to violate laws or regulations. The company complies with all relevant regulations to handle any employee violations, demerits, dismissals, and legal action. To help employees conduct the code of ethics within the company, we have set up an internal website on CSR that employees can access at any time for information. Nuvoton even offers online courses to help employees familiarize themselves with the company's CSR duties and its code of ethics.

G4-15, G4-56

4.4 法規遵循

新唐科技之營運區域遍及全球，本公司經營團隊均密切注意可能對公司業務及財務有重大影響之國內外政策與法令。

新唐科技及其員工皆須遵守與業務相關之法律及政策，新唐科技並不定期推出法規遵循相關課程，讓同仁了解最新法令規範，進而強化對從業道德規範之承諾。為使同仁了解各項法規及遵循重點，新唐科技開辦相關課程，課程包括環境保護、內線交易、進出口管制、機密資訊保護等。針對特定專題，新唐科技亦開辦面授課程，課程包含內線交易、進出口管制、智慧財產權保護等。

法務單位之同仁不定期參與外部訓練課程及研討會，以了解法規修訂現況及法規遵循事項。為使全體同仁了解各項法規，新唐科技內部網站提供相關之教育訓練及宣導資源，並公告最新之公司內規，以公開之資訊，促使同仁遵循正確之行為準則。

4.5 風險管理

新唐科技關注、整合並管理所有可能對營運造成影響的潛在風險，分為以下幾類說明：

4.5.1 財務風險管理

在財務面可能會遇到的風險包括：銀行融資額度是否充足致影響公司資金的籌措、利率與匯率的波動、現金流量的掌握與流動性等等。針對這些潛在的問題，我們採取的因應對策如下：

4.4 Regulatory Compliance

The regions in which Nuvoton operates are located all over the world. The company's management team pays close attention to both domestic and foreign policies and laws that may have a significant impact on the company's business and financial capabilities.

Nuvoton and its employees are required to comply with the laws and policies related to the company's business. Nuvoton launches compliance-related courses on an irregular basis for employees to learn about the latest legal regulations, further strengthening its commitment to ethical business conduct. To help employees understand the main points of regulations and compliance, Nuvoton offers courses that cover subjects, such as environmental protection, insider trading, import and export controls, and confidential information protection. Nuvoton also offers face-to-face courses for specific subjects, such as insider trading, import and export controls, and intellectual property rights.

Employees in the legal affairs department participate in training courses and seminars outside of the company on an irregular basis to gain deeper understanding into the status of revised regulations and compliance matters. To help employees understand these regulations, Nuvoton's internal website provides relevant training and advocacy resources. Furthermore, the site also publishes public announcements of the company's newest internal regulations as a way to encourage employees to follow guidelines for proper behavior.

4.5 Risk Management

Nuvoton focuses on, consolidates, and manages all potential risks that may affect its operations, as described in the following categories:

4.5.1 Financial Risk Management

Financial risks that Nuvoton may encounter include: insufficiency of a bank's financing facilities which influences the financing of company funds, fluctuations in interest and exchange rates, and the capture of cash flow and liquidity. In response to these potential problems, we have implemented the following countermeasures:

<p>銀行端 Banks</p>	<ul style="list-style-type: none"> · 分散貸款銀行，避免額躡過於集中，隨時與銀行保持暢通的聯繫。 Decentralize bank loans to avoid excessive concentration of credit. Maintain regular communication with banks. · 適度增加備用額度，以備不時之需。 Appropriately increase standby credit to prepare for contingencies.
<p>資金端 Funds</p>	<ul style="list-style-type: none"> · 評估市場資金供需與利率變化，慎選籌資方式。 Assess the supply and demand of funds in the market, as well as changes in interest rates. Carefully choose funding modalities. <p>以自然避險為原則，匯率波動大時，輔以避險操作來降低匯率風險。 Use principles of natural hedging. When exchange rates undergo large fluctuations, supplement with hedging to reduce exchange rate risk.</p>
<p>業務端 Business</p>	<ul style="list-style-type: none"> · 縮短應收帳款回收期。 Reduce receivables turnover period. · 生產部門降低存貨持有期。 Reduce inventory holding period in production.

4.5.2 信用管理

為保障公司資產、降低信用風險，我們制定「授信管理辦法」，依信用等級進行管理，經內部核可之第三人財務狀況大都屬良好、穩健；如有風險疑慮者，公司將再要求風險轉移方式（如取得擔保品、以信用狀進行交易等等）從事往來，以確保交易的安全，防止呆帳發生。為避免人為判斷錯誤，新唐科技善用資訊系統進行信用風險管理：新唐科技出貨時，風險管理系統將自動檢覈客戶的信用額躡，系統判斷為異常狀況時，立即啟動對應之異常管理措施，並彙報高階主管進行決策，以確實管理授信異常狀況。

4.5.2 Credit Management

To protect the company's assets and reduce credit risk, we have developed "Credit Management Measures". Though the process of managing credit ratings, the third parties that are internally approved are mostly considered to be good and reliable. If doubts are raised, the company will require a method for transferring risk (such as obtaining collateral or letters of credit for transactions) to proceed with business. Through this approach, the security of transactions and prevention from bad debt are ensured. To avoid errors in human judgment, Nuvoton utilizes an information system to conduct credit risk management: When Nuvoton prepares to make a shipment, the risk management system will automatically check the customer's credit line. If the system detects any abnormalities, it will immediately launch management by exception measures in response, while issuing a report to executives to serve as a basis for decision-making in managing credit anomalies.

4.5.3 資訊安全管理

新唐科技以資訊安全零風險為目標，我們嚴密控管資訊安全，以確保日常營運正常運作，可為公司員工、客戶、供應商提供安全和妥適的服務。

為提供全球客戶品質良好的產品與全方位的服務，新唐科技重視資訊的安全與保障。對此，我們針對資訊的機密性與完整性，採取嚴密的控管措施，如下：

4.5.3 Information Security Management

Nuvoton continuously seeks to achieve a level of zero risk in its information security. We maintain strict quality control of information security to ensure the proper functioning of daily operations, and provide company employees, customers, and suppliers with secure and appropriate services.

To provide global customers with good quality products and a full range of services, Nuvoton places a strong emphasis on the safety and security of information. In this regard, we focus on preserving the confidentiality and integrity of information by implementing strict control measures, which are as follows:

<p>檔案保存 Recordkeeping</p>	<ul style="list-style-type: none"> 除設置專責人員定期進行電腦系統、應用軟體及資料檔案備份外，並進行異地備份及存放，以提升檔案保存之安全性。 <p>In addition to assigning dedicated personnel to regularly backup computer systems, application software, and data files, the company also utilizes off-site backup and storage to enhance the security of files.</p>
<p>資料安全防護 Data Security</p>	<ul style="list-style-type: none"> 對內防護上，個人電腦端建置病毒防護機制，定期進行系統軟體更新，提高電腦本身的防禦力；對外防護上，建置防火牆入侵偵測設備及各項資安閘道器，嚴格監控異常網路行為，杜絕駭客入侵及個資外洩的風險。 <p>For internal protection, all computers are installed with anti-virus mechanisms. We also regularly update system software to improve the defense capabilities of computers. For external protection, we have set up firewalls, intrusion detection equipment, and various information security gateways. Abnormal network behavior is strictly monitored to eliminate the risks of hacking and leaking of personal information.</p>
<p>系統快速復原 Rapid Recovery System</p>	<ul style="list-style-type: none"> 定期進行異機、異地系統復原的實際演練，提升系統穩定度，以確保公司正常營運。 <p>We regularly conduct practical recovery exercises on different, foreign systems to enhance the stability of our systems and ensure the continuation of normal business operations.</p>
<p>伺服器虛擬化 Server Virtualization</p>	<ul style="list-style-type: none"> 進行伺服器虛擬化，便於集中管理。並將資料儲存設備建立容錯機制，確保資料安全及快速復原。 <p>Server virtualization is implemented to facilitate centralized management. Furthermore, fault-tolerant mechanisms are installed for data storage equipment to ensure data security and rapid recovery.</p>

4.5.4 安全衛生風險管理

新唐科技於2008年通過國際認可之職業安全衛生管理系統(OHSAS 18001)認證。一直以來，新唐科技恪遵本職業安全衛生管理系統的規範、國內法規及利害相關者等要求，透過全面清查作業流程與內容，進行危害鑑別與風險評估。並運用PDCA系統化手法，執行監督與改善模式，以推行本公司安全衛生工作，建立長遠、卓越、向善、向上的安全衛生文化，並期待持續強化及提昇安全衛生風險管理績效，以達成本公司安全衛生願景－「身、心、靈健康快樂職場之幸福企業」。

新唐科技針對整體安全衛生上可能發生的風險，透過危害鑑別與風險評估等方向進行分析，可歸納為：機械設備捲夾危害風險、作業場所之噪音危害風險、員工與承攬商之施工安全風險、化學品儲存與使用安全風險、火災、風災、水災、地震及風險等天災。

4.5.4 Managing Risks to Health and Safety

In 2008, Nuvoton received certification as an internationally-recognized "Occupational Health and Safety Management System" (OHSAS 18001). Nuvoton has always abided by the regulations of the Occupational Health and Safety Management System, domestic laws and regulations, and the requests of stakeholders. Through a comprehensive inspection process, Nuvoton conducts hazard identification and risk assessment. Furthermore, the company uses the Plan-Do-Check-Action (PDCA) approach to systematically monitor and improve effectiveness, to ensure the safety and health of the workplace, and to establish long-term excellence through a progressive culture of safety and health. Nuvoton looks forward to continue strengthening its health and safety risk management to achieve its vision - "A good business is driven by a workplace comprised of healthy, happy bodies, minds, and spirits."

In regards to potential risks to overall health and safety, Nuvoton has been conducting analyses through hazard identification, risk assessment, and other such approaches. The potential hazards covered by the analyses can be summarized as follows: machinery and equipment, workplace noise, workplace safety for employees and vendors, chemical storage and usage, fires, storms, floods, earthquakes, natural disasters and other such risks.

5. 最佳職場

5.1 人力結構

截至 2013 年 12 月 31 日止，新唐科技共有 1,269 名員工，其中包括 146 位主管人員、723 位專業人員、393 位技術人員、7 位助理人員，主管人員中，處長級以上高階主管共 46 人。2013 年底，新唐科技女性同仁約佔員工總數的 47%。主管人員與專業人員中，男女比例約為 2.98 : 1，顯示在臺灣社經環境中，就讀相關專業工程系所的學生仍以男性居多，故專業人員比例呈現此現象。 **G4-9, G4-10, G4-EC6**

就年齡分布而言，新唐科技恪遵臺灣「勞動基準法」規定，不僱用未滿 15 歲之人員，我們亦未僱用 15 歲以上未滿 18 歲之未成年員工，新唐科技 18 歲至 40 歲以下同仁約佔整體員工比例為 58%。以學歷而論，學位為碩士以上者約為 31%，若就主管與專業人員中，擁有碩士以上學位者比例為 45%。 **G4-10**

新唐科技人員僱用類型，除了定型化契約人員為非正式員工外，職員與工員皆為正式員工，佔整體人員總比例達 99%，且受集體協商協定保障之總員工數比例為 100%。 **G4-11**

5. Best Workplace

5.1 Human Resources Structure

As of December 31, 2013, Nuvoton is comprised of 1,269 employees, which includes 146 managerial, 723 professional, 393 technical, and 7 assistant personnel. Amongst management personnel, 46 hold executive positions higher than department heads. At the end of 2013, 47% of our total workforce was comprised of female personnel. The male to female ratio among managerial and professional personnel is 2.98: 1, which is consistent with the fact that more males study in fields relevant to this industry in Taiwan's socioeconomic environment. **G4-9, G4-10, G4-EC6**

Regarding age distribution, Nuvoton abides by the regulations of the "Labor Standards Act". We do not hire individuals under the ages of 15. Furthermore, we do not hire underage people between the ages of 15 and 18. Employees between the ages of 18 and 40 occupy 58% of the total workforce. Regarding academic backgrounds, more than 31% of employees have obtained a master's degree or higher. For managerial and professional personnel, this percentage rises to 45%. **G4-10**

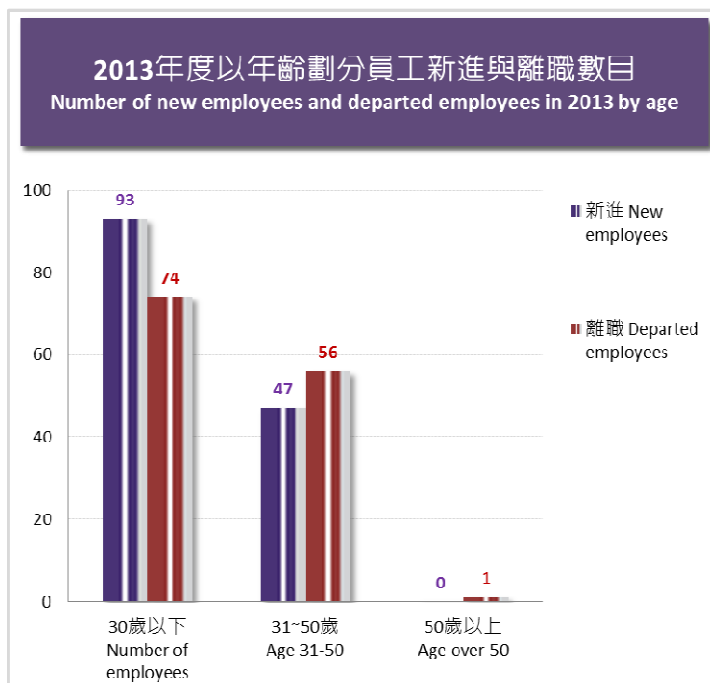
Concerning the types of employment, apart from fixed-term contract who are serving as part-time and temporary employees, all staff and operators are considered to be full-time employees, comprising 99% of the total workforce. 100% of the employees are protected by collective bargaining agreements. **G4-11**

人力結構
Human Resources Structure G4-9, G4-10, G4-9

類別 Category	組別 Division	男性 Male		女性 Female		組別小計與比例 Subtotal by Division and Proportion	
		人數 No.	佔該組比例 In Proportion to the Division	人數 No.	佔該組比例 In Proportion to the Division	人數 No.	佔全體員工比例 In Proportion to all Employees
職務 Job Function	主管人員 Managerial	128	88%	18	12%	146	12%
	專業人員 Professional	523	72%	200	28%	723	57%
	技術人員 Technical	17	4%	376	96%	393	31%
	助理人員 Assistant	2	29%	5	71%	7	1%
年齡 Age	18~20	0	0%	2	100%	2	0%
	21~30	98	45%	119	55%	217	17%
	31~40	307	59%	217	41%	524	41%
	41~50	230	50%	228	50%	458	36%
	51~60	35	51%	33	49%	68	5%
學歷 Education	博士 PhD	4	100%	0	0%	4	0%
	碩士 Master's	348	88%	46	12%	394	31%
	學士 Bachelor's	242	64%	134	36%	376	30%
	專科 Vocational School	60	47%	69	53%	129	10%
	高中 Senior High School	15	4%	333	96%	348	27%
	高中以下 Under Senior High School	1	6%	17	94%	18	1%
僱用類型 Employment Type	正式僱員 Full-Time Employees	668	53%	594	47%	1262	99%
	非正式僱員 Part-Time and Temporary Employees	2	29%	5	71%	7	1%
僱用合同 Employment Contract	職員 Staffs	651	75%	218	25%	869	68%
	工員 Operators	17	4%	376	96%	393	31%
	定契 Fixed-Term Contract	2	29%	5	71%	7	1%
小計 Subtotal		670	53%	599	47%		--
總計 Total							1269

新唐科技 2013 年度新招募同仁達 140 人，其中 30 歲以下新血約佔 66%，女性新招募人數為 77 人。2013 年度離職人數為 131 位，相較於 2012 年度 180 位同仁離職人數略為下降。 G4-LA1

In 2013, Nuvoton hired 140 new employees, of which 66% were under the age of 30 and 77 were female. The number of persons who resigned in 2013 was 131, a slight decrease from last year's number of 180. G4-LA1



5.2 薪資與福利

新唐科技提供員工身心均衡發展的工作環境。為落實休假管理措施，我們推行預排休假管理機制，協助員工妥善規劃休假；亦積極提醒同仁適度休假，推展健康職場概念。 **G4-EC1**

我們亦遵循「性別工作平等法」所賦予勞工之權利，女性及男性員工可以申請產假及陪產假：於 2012 年至 2013 年間分別有 34 位與 27 位女性員工申請產假，且假期屆滿後回任比例達 100%；男性員工申請陪產假者共有 61 位與 43 位，且假期屆滿後回任比例皆達 100%。 **G4-LA3**

5.2 Salary and Benefits

Nuvoton provides employees with a workplace in which they can develop both mentally and physically in a balanced manner. For employee leave management measures, we implement a preplanned vacation management system to assist employees in planning their vacations. Also, we actively remind employees to take vacations appropriately to promote a healthy work environment. **G4-EC1**

Furthermore, we respect the labor rights provided by the "Act of Gender Equality in Employment". Both female and male employees qualify for maternity/paternity/nursery leave. In 2012 and 2013, 34 and 27 female employees, respectively, took parental leave, of which 100% returned to their position afterwards; and 61 and 43 male employees, respectively, took parental leave, of which 100% returned to their positions afterwards. **G4-LA3**

產假及陪產假狀況一覽表

Table of Personnel on Maternity/Paternity Leave and Nursery Leave **G4-LA3**

年度 Year	女性 Female	男性 Male	請產假人數 No. of People on Maternity Leave	請陪產假人數 No. of People on Nursery Leave	請完產假 返回工作崗位 Returned to Work after Maternity Leave		請完陪產假 返回工作崗位 Return to Work after Nursery Leave		請完產假 一年內離職 Resignation in 1 year after Maternity Leave		請完陪產假 一年內離職 Resignation in 1 year after Nursery Leave	
					人數	百分比	人數	百分比	人數	百分比	人數	百分比
					No.	%	No.	%	No.	%	No.	%
2009	585	639	31	56	31	100%	56	100%	5	16%	5	9%
2010	620	625	32	47	32	100%	47	100%	5	16%	3	6%
2011	596	656	31	45	31	100%	45	100%	2	6%	3	7%
2012	587	670	34	61	34	100%	61	100%	3	9%	8	13%
2013	599	670	27	43	27	100%	43	100%	0	0%	7	16%

5.3 學習與發展

新唐科技處在激烈的產業競爭環境，我們致力提供多元化的培訓機會，協助員工持續提升專業能力，以利提升公司整體人力素質。

我們根據同仁工作所需及績效評量結果規劃與並安排年度訓練計劃，提供的訓練課程種類包括新進人員基礎訓練、主管管理技能訓練、共通管理訓練、專業技術訓練、品質管理訓練、環安衛訓練等。

2013年，新唐科技員工總訓練時數約為1萬4千小時，總參訓人次近1萬4千人次，平均每位同仁的受訓時數約為11小時。

5.3 Learning and Developing

Nuvoton exists in a highly competitive environment. To elevate the overall quality of our human resources, we are dedicated to providing a diverse range of training opportunities, which help the continuous development of professional skills.

We arrange annual training programs according to the needs of our employees and the results of performance reviews. These programs include training courses for new employees, management skills, common management, professional techniques, quality control, and environmental safety.

In 2013, the total number of hours spent on employee training amounted to 14,000 with 14,000 participants. Each employee received an average of 11 hours of training.

員工訓練時數分析表

Analysis of Employee Training

項目 Item	主管人員 Management	間接人員 Indirect	直接人員 Direct	總計 Total
(1) 員工人數(至 2013/12/31 為止) Number of Employees (as of 12/31/2013)	146	730	393	1,269
(2) 總訓練時數 Total hours in training	501	10,952	3,277	14,730
(3)=(2)/(1) 各類員工平均受訓時數 Average hours in training per employee type	3.43	15.00	8.34	11.61

註：上述資料包括教室課程、線上學習、外訓等時數。

Note: The above information includes classroom courses, online instruction, and outside training.

為提供新唐科技員工更多元的訓練內容，我們從 2013 年起導入「雲端學習平台」(Cloud Learning)，透過此平台，員工學習不再受時間、空間限制。至 2013 年底，新唐科技的雲端學習平台共提供 299 門線上課程，內容涵蓋共通管理、專業技術、語言學習等不同類別的課程。為確保課程品質，我們透過課程滿意度問卷與其他評估機制來評量課程效益，作為持續改善的依據。

5.4 工作環境

新唐科技相信：每一位員工都是公司重要的夥伴。新唐科技也相信：健康、活力的生活是生命的基石。

- 我們提供員工發展的舞台，並協助員工擁有健全身心。
- 我們提供員工獨立的工作空間、符合人體工學的辦公桌椅設施。
- 我們提供心靈休閒的期刊閱覽空間，並備有免費咖啡飲料吧，員工可以在瀟灑咖啡香的寫意空間裡思索沉澱、激發創意。
- 我們提供幫助員工身體放鬆的健身房，設置跑步機、滑步機、腳踏車與按摩椅等設備，鼓勵員工養成揮汗、健身的習慣。
- 我們與全省兩千餘家特約廠商簽約，讓新唐人享受專屬優惠。
- 我們與專業諮商單位進行合作，提供即時服務，協助同仁適時紓解壓力。
- 我們協助同仁辦理國立科學工業園區實驗高級中學的中小學、幼稚園入學服務，讓同仁工作與生活面面俱到。

In 2013, to provide our employees with a diverse range of training, we launched “Cloud Learning”, a platform through which our employees can learn without being limited by time or space. By the end of 2013, Nuvoton Cloud Learning was offering 299 online courses on common management, professional techniques, language skills, and other various subjects. To ensure the quality of these courses, surveys and other review mechanisms were used to evaluate their effectiveness. These results were then used as a basis for continuous improvement.

5.4 Work Environment

At Nuvoton, we believe that each employee is an important partner of our company. We also believe that health and energy serve as the vital foundations for life.

- We provide our employees with a stage for development, and assist them in achieving soundness of mind and body.
- We provide individual work spaces and ergonomic office equipment.
- For breaks, we provide reading spaces, and a free coffee and beverage bar where employees may meditate and find creative inspiration.
- For the physical relaxation of our employees, we offer a gym equipped with treadmills, ellipticals, massage chairs, and more. We encourage employees to cultivate a habit of working out and sweating.
- We have signed up with over 2,000 designated vendors across Taiwan to provide Nuvoton employees with special discounts.
- We work with professional consultants to design and provide immediate services that help employees relieve stress in a timely manner.
- We assist employees with enrolling their children at National Experimental High School at Hsinchu Science Park for primary and secondary school, and kindergarten to care for all aspects of our employee's lives.

5.4.1 舒適的工作環境

5.4.1.1 新唐科技餐廳—吃得好安心

安全、多樣與美味的餐食選擇，是現代人極為重視的生活樂趣。新唐科技為了讓同仁擁有美好的用餐體驗，我們建立完善的員工餐廳管理系統，提供自助餐、麵食、風味餐、素食、簡餐、便利商店多樣選擇。

為提供同仁健康且安全的團膳服務，我們聘請具餐飲管理專業之大學教授作為顧問，進行食品安全衛生管理輔導，並與團膳廠商共同導入 HACCP(Hazard Analysis and Critical Control Points)系統，成為科學園區內第一家取得政府發放 HACCP 認證之廠商，確保提供同仁安全、健康且優質的餐飲服務。

5.4.1 A Comfortable Work Environment

5.4.1.1 Nuvoton Cafeteria - Safe and Healthy Foods

Safe, diverse, and delicious meal options are a source of joy in the lives of modern people. To provide our colleagues with wonderful dining experiences, we have established a comprehensive cafeteria management system comprised of buffets, noodles, stylized meals, vegetarian foods, light meals, and diverse selections from convenience stores.

To offer healthy and safe catering services, we have commissioned a university professor who specializes in food and beverage management as a consultant to advise us on food sanitation and safety issues. Working together with caterers, we have also introduced the HACCP (Hazard Analysis and Critical Control Points) system, enabling us to become the first company in the science park to receive a HACCP certificate issued by the government. We guarantee safe, healthy, and quality dining services.



顧問進廠指導

Consultants providing guidance at the foundry



餐飲業食品安全管制系統衛生評鑑證明書

Hazard Analysis and Critical Control Points Certificate

餐廳實景照片

Scenes from the cafeteria



5.4.1.2 快樂的工作環境

我們為促進員工身、心、靈健康，鼓勵員工成立社團，讓同仁於工作及休閒之間取得平衡，培養規律運動習慣，公司內設置盲人按摩專區提供員工紓壓解勞的服務，並舉辦各式體育競賽及文藝展覽活動，期盼員工培養良好運動習慣及休閒興趣，也提供同仁工作之餘交誼聚會管道。目前成立的社團及曾舉辦之專班有單車社、羽球社、瑜珈社、戒菸班、減重班、繪畫欣賞班…等。

5.4.1.2 A Happy Work Environment

To promote physical and mental health, we encourage employees to establish groups that allow them to achieve a balance between work and leisure, as well as cultivate regular exercising habits. In the company, we have areas for massages by visual impaired individuals to help our employees relieve stress, and a variety of cultural and sport events. We hope that our employees may cultivate good exercising habits and interests. We also offer our employees with places for gatherings. Currently our established clubs and classes, include a bicycle club, badminton club, yoga club, smoking cessation classes, weight loss classes, painting appreciation classes, and more.



陽光廳休憩區
Sunshine Lounge Area



羽球社
Badminton Club



籃球社
Basketball Club



壘球社
Softball Club

5.4.2 新唐科技特約商店 APP — 特約商店隨手查

我們截至 2013 年 6 月止，特約商店數量 2181 家，簽約性質可簡要區分為：美食類、藝術類、住宿類及休閒類等類別；並推出特約商店 APP，讓同仁可隨時隨地直接利用智慧型手機查詢已簽約特約商店的營業地址及連絡電話等基本資料之外，亦可即時進行衛星定位及查詢路線。

5.5 勞資關係

和諧的員工關係來自良好的溝通，新唐科技致力於營造互信和諧的勞資關係，於企業內部建構暢通且多元化的意見反映及溝通管道，包括設置意見箱、性騷擾及員工申訴專責受理單位，各功能單位均有定期會議，如、部門月會、勞資會議、職工福利委員會、環安委員會、主管季會等溝通會議；此外員工皆可利用各種管道表達意見或建議並獲得回應。 **G4-HR6**

透過縝密的溝通網絡及良好的溝通機制，新唐科技自成立以來勞資關係和諧，未曾有因勞資糾紛而產生損失及影響員工關係。 **G4-LA4**

5.4.2 Nuvoton APP for Specially Designated Shops - Designated Shops at Your Fingertips

As of June of 2013, we have signed up with 2,181 designated vendors of various natures-food, art, lodging, leisure, etc. We also launched an APP specifically for these designated vendors so that our employees may easily access information about them using a smartphone, as well as receive GPS directions for route planning.

5.5 Labor Relations

Harmonious relationships with employees stem from good communication. Nuvoton strives to create a harmonious and mutually trusting relationship with our employees. For all our internal departments, we have constructed formal and informal channels for feedback and communication, including feedback boxes and sexual harassment and employee complaint units. Each functional unit regularly holds monthly department, labor/management, employee benefits committee, and environmental safety committee meetings, as well as quarterly meetings between department heads, and other gatherings for communication. Moreover, all employees may voice their opinions and suggestions through various channels and be sure to receive a response. **G4-HR6**

Since our establishment, Nuvoton has always maintained harmonious labor relations through intricate communication networks and good communication mechanisms. In fact, there have never been incidences of labor or employment disputes that resulted in the damaging of labor relations. **G4-LA4**

新唐科技溝通管道

Nuvoton Communication Channel



5.6 職業安全與健康

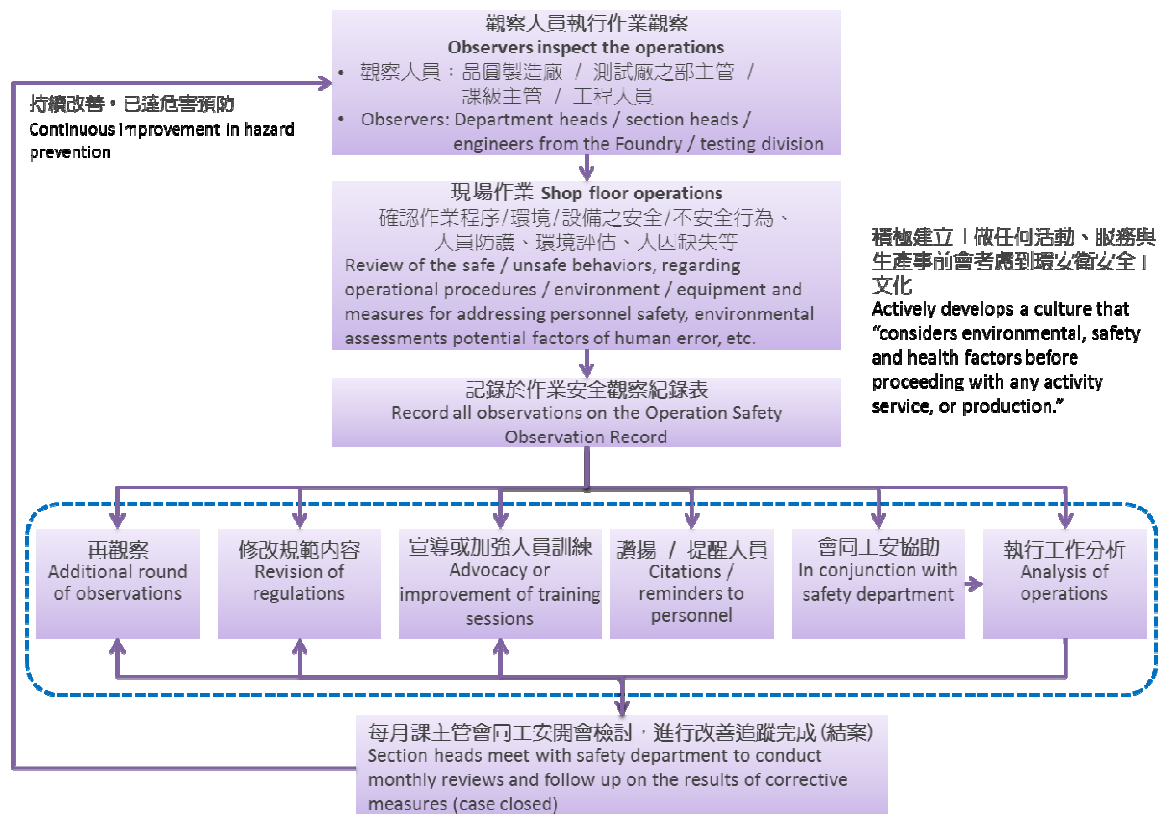
新唐科技環安衛政策為致力於符合國際先進之安全、衛生、環保標準與健康促進理念，承諾提供與維持一個合於法令規定與工業實務的工作環境，並持續改善以盡力杜絕任何可能導致人員疾病傷害、環境污染、財產損失等可預見之風險。可能發生的災害與損失可經由完善的管理與全體員工的積極參與，而達到事先預防的效果。

5.6 Occupational Safety and Health

Nuvoton's environment, safety, and health policies are committed to complying with progressive international standards for safety, sanitation, environmental protection, and health. It promises to provide and maintain a work environment that complies with all regulations suitable for its business operations, and continually improve to eradicate any foreseeable risks that may cause illness or harm to personnel, environmental pollution, or property loss. Possible loss and hazard can be prevented with comprehensive management and active participation of all employees.

作業安全觀察流程圖

Operation Safety Observation Process Flow Chart



5.6.1 安全文化建立

零職災、促進同仁健康乃新唐科技應有之責任，新唐科技積極建立並推動我們的環安衛文化：「在從事任何的活動、服務與生產時，事前會考慮到環安衛事項」；每月由各單位主管與工程師進行作業觀察，藉由分析同仁作業實況，培養同仁提出作業場所潛在危害的能力，經協商、討論修正後建立安全的作業方法，持續改善，以達危害預防，並由各級主管偕同工安開會檢討，進行改善追蹤，落實安全衛生管理與溝通。

5.6.2 設置「安全衛生委員會」，落實溝通機制

新唐科技設置全公司「安全衛生委員會」，每季召開會議討論安全衛生相關事項，落實安全衛生溝通。 G4-34, G4-LA5

5.6.1 Establishing a Safety-Based Culture

To Nuvoton, ensuring zero occupational accidents and promoting health are obligatory responsibilities. We are actively establishing and promoting our culture of environmental protection, safety, and health: “Before engaging in any activity, service, or production, environmental protection, safety, and health concerns must be considered first.” Monthly inspections of employee working conditions are conducted by department heads and engineers, while encouraging employees to actively identify potential risks. Then, through negotiation and discussion, safer methods of operation are established to prevent potential dangers. Along with staff, various levels of management would then hold a meeting to examine and follow-up on improvements, implementing environmental protection, safety, and health management and communication measures.

5.6.2 Setting up the “Safety and Health Committee” to Implement Communication Mechanisms

Nuvoton has established the “Safety and Health Committee”, which holds quarterly meetings to discuss relevant issues and implement communication in regards to safety and health. G4-34, G4-LA5



5.6.3 作業安全管制

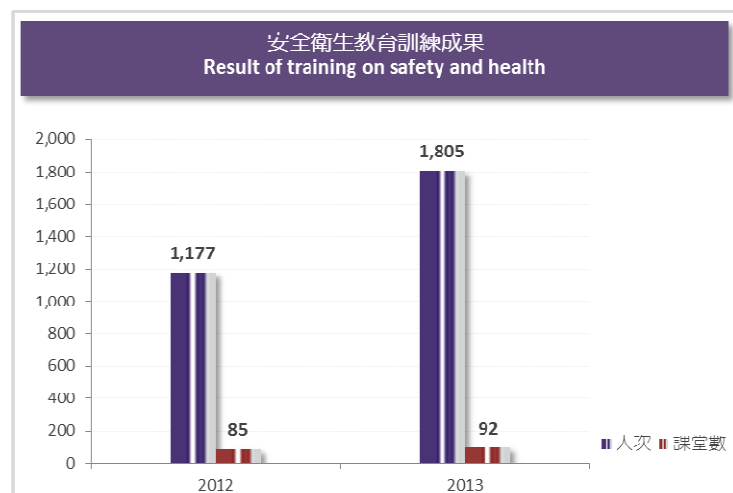
在作業安全管理面向，針對高風險作業管制，清楚釐訂承攬商入廠安全衛生及環保管理事項，結合例行性巡檢機制，利用走動式管理以落實安全政策。

5.6.4 變更管理制度

在變更管理面向中，最重要在於先期掌控變更的資訊，對此新唐科技除要求各單位應主動通報變更資訊外，建置變更申請、材料樣品鑑定程序、製程/設備變更鑑審會議(Process Change Review Board)、採購等管理系統，有效掌控變更資訊。各部門在進行變更作業時，須進行初步風險判定及衝擊評估，偕同安衛管理部及相關部門確認對既有安全防護並無影響或待新增之防護設備建置後，才可進行。

5.6.5 教育訓練及緊急應變

除推動相關安全衛生活動外，新唐科技注重同仁安全衛生之教育訓練，加強同仁對風險認知、危害預防及緊急應變能力等知識與技能，培養員工緊急應變能力及安全觀念，有效預防職業災害發生；此外每年對於公司內可能發生各種意外事故狀況皆規劃緊急應變演練，使同仁熟悉通報程序、現場管制、傷患救護、救災器材操作與支援。



5.6.3 Operational Security Control

Regarding operational security control for managing high risk operations, we have clearly defined all safety, health, and environmental protection matters for vendors and their visits to the foundry. These are combined with routine inspections and the adoption of mobile management to fully carry out safety policies.

5.6.4 System for Changes in Management

Concerning any changes in management, the most crucial element is to fully inform everyone about these changes at an early stage. Therefore, Nuvoton requests that all units not only take the initiative of reporting changes in information, but also establish procedures for applying for changes and identifying sample materials, a Process Change Review Board, procurement, and other management systems to effectively control changes in information. All departments must, before implementing operational alterations, conduct a preliminary risk and impact evaluation and, only when safety and health managing departments and relevant units have confirmed that the alteration will have no effects on the original protection or is not pending newly augmented protective devices can these alterations proceed.

5.6.5 Training and Emergency Management

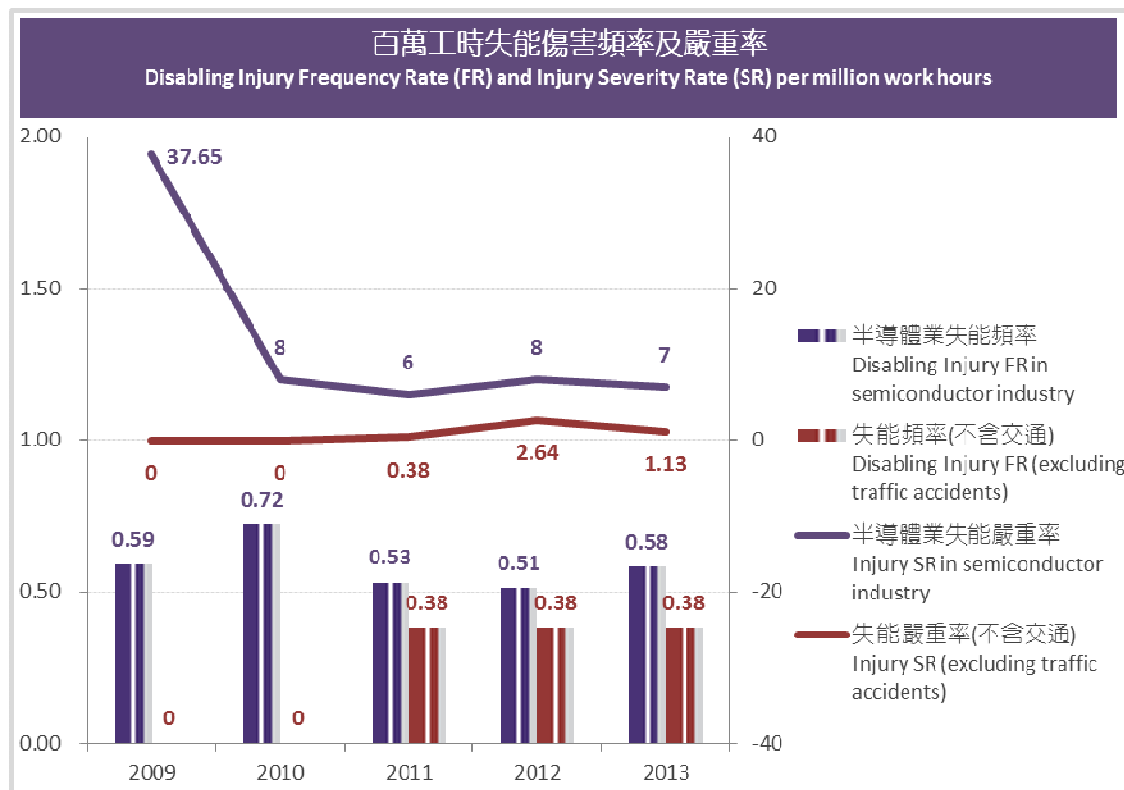
Besides promoting safety and sanitation activities, Nuvoton also places emphasis on safety and sanitation training, strengthening risk recognition abilities in employees and promoting damage prevention knowledge, as well as emergency management skills. Cultivation of emergency management abilities and safety concepts may efficiently prevent occupational hazards; furthermore, Nuvoton conducts drill plans against possible accidents and ensures that all employees are familiar with the protocols of alarming, situation controls, first aid, disaster recovery equipment operation and support.

5.6.6 職業災害指標

新唐科技職災統計分析，依勞動部公布之職業災害統計指標，選擇失能傷害頻率 (FR)及失能傷害嚴重率(SR)為主要統計依據。新唐科技 2012 年及 2013 年的失能傷害頻率(FR)分別為：0.38 / 0.38，失能傷害嚴重率(SR)分別為：2.64 / 1.13，均遠低於半導體製造業失能傷害頻率(FR)：0.58，失能傷害嚴重率(SR)：7.00，其中失能傷害頻率維持穩定水準，失能傷害嚴重率較 2011 年~2012 年低，我們將持續推動減災預防，朝零職災目標邁進。 G4-LA6

5.6.6 Occupational Accidents Indicator

Following the indicators published by the Ministry of Labor, Nuvoton's occupational accidents analysis uses the disabling frequency rate (FR) and disabling severity rate (SR) for its statistical basis. In 2012 and 2013, the FR was 0.38 and 0.38, respectively, while the SR was 2.64 and 1.13, respectively. All statistics are far lower than the average FR of 0.58 and SR of 7.00 for the semiconductor industry. For Nuvoton, the FR has been maintained at the same level, while the SR value was lower than that of 2011 to 2012. We shall continue to promote accident prevention measures, and aim for the objective of zero occupational accidents. G4-LA6



5.7 健康管理與促進計劃

新唐科技健康管理與促進計劃的藍圖是希望打造「快樂工作，健康生活」的樂活理念，期望同仁能把健康、家庭、工作、休閒、運動等人生的關鍵事項，在生活中拼湊出最適合的拼圖。

半導體產業的員工，在要求績效以外，還需要隨時有創新的點子，所以健康相形重要，「有健康，才能拚經濟」，因此，新唐科技健康中心提供員工全天候的照護服務，24 小時長駐護理人員，我們不但關心同仁健康，更進一步地協助同仁處理健康上的大小事，充份展現公司用心的關懷。

5.7.1 健康管理計劃

5.7.1.1 優於法規的健檢頻率與項目

根據國民健康署的統計，癌症有年輕化的趨勢，所以本公司成立以來便將「每年員工健檢一次」訂為同仁的權利與義務，並於每年健檢項目中增加不同檢查項目，如癌症篩檢及腹部超音波檢查，以期達到「早期發現早期治療」，藉此已發現幾位員工的健康問題，並幫助員工即時處理。健康檢查到檢率亦每年維持 100%。

5.7.1.2 醫師臨廠服務

每月三次職業專科醫師臨廠，提供諮詢、巡廠、健康管理等服務。



醫師巡廠

Physicians visit the production line

5.7 Health Management and Propagation Projects

Nuvoton's blueprint for health management and propagation exists in hopes of building a LOHAS ideal - "happily working, healthily living", and that employees may fit all the key pieces of life - health, family, work, leisure, and exercising into the most appropriate puzzle. Semiconductor industry employees, apart from having to maintain high performance, must also stay innovative and full of ideas, therefore, health is imperative - "We can only fight for our economy in health". This is why the Nuvoton health center is staffed 24 hours, providing day-long care. Not only do we care about the health of our employees, we also further assist them with any problems, be it big or small, concerning health, fully exhibiting the care and concerns the company harbors for its employees.

5.7.1 Health Management Plans

5.7.1.1 Frequent Health Checks Covering a Wide Scope

According to the statistics of the Ministry of Health and Welfare, cancer is now occurring at younger ages. As a result, we have made "one annual health check per employee" both the right and obligation of our employees, and have added health assessment items each year since the establishment of our company. For example, cancer screening and abdominal ultrasound exam in order to achieve "early discovery and timely treatment" - through this policy, a few cases of employee health problems have been discovered and assistance offered. Health check rate remains at 100% each year.

5.7.1.2 House (Company) Call Doctors Services

Thrice a month, specialist physicians pay house (company) visits, providing services in consulting, inspecting, and health managements, right within the company.

5.7.1.3 新陳代謝管理計劃

由於代謝症候群演變為心肌梗塞、中風等問題機率相當高，所以本公司配合國民健康署新陳代謝管理計劃的推動，已實施多年代謝症候群族群的分級管理及追蹤，並與健康促進活動減重班、戒菸班、健走活動...等連結，達成管理目標。

5.7.1.4 肝功能異常管理計劃

肝功能異常原因除了病毒性肝炎之外，脂肪肝也是禍首之一，但是多數員工一開始並不清楚如何找出原因，進而定期追蹤，所以，健康中心多年前即實施本計劃，對於狀況異常之員工給予知識衛教，每半年協助安排肝癌篩檢，切斷肝癌三部曲：肝炎→肝硬化→肝癌，以此積極保護員工健康。



急救訓練
CPR Training



超音波檢查
Ultrasound Examination

5.7.1.3 Metabolic Management Programs

Metabolic syndromes often cause cardiac arrests and strokes. Therefore, in cooperation with the metabolism management plan established by the Ministry of Health and Welfare, our company has implemented graded metabolic syndrome managements and monitoring for many years now. Management plans are also, in order to achieve management goals, connected with health promoting classes such as, weight loss classes, smoking cessation classes, power walking classes, etc.

5.7.1.4 Liver Dysfunction Management Programs

Apart from liver dysfunctions that are caused by viruses, others might be due to another culprit-triglyceride fat; however, most employees did not know how to locate the problem in advance in order to implement long-term monitoring. Therefore, our health care center has begun this plan several years ago to provide knowledgeable health educations for employees who are experiencing dysfunction of the liver. Every six months liver cancer screening is arranged to halt the deadly processions - liver infection, liver cirrhosis, liver cancer - it is a procedure we eagerly implement to ensure the health of our employees.

5.7.2 健康促進計劃

5.7.2.1 2012 年

降低新陳代謝及心血管疾病等風險，推動員工健走習慣。

- 減重班：與長庚醫院合作為期 3 個月，提供講座及鼓勵健走；員工健康/生化指標明顯改善並鼓勵持續維持成效及毅力。
- 健走：6 個月健走期間，每週 2 次，提供同仁健康運動之習慣。

5.7.2.2 2013 年

為照顧同仁身心之健康，新唐科技籌畫多項健康促進活動。

- 戒菸班：33 位員工參加，為期 13 週，共 11 位員工戒菸成功，其他員工平均減少菸量超過一半 (58%)。
- 紓壓計劃：定期進行問卷普查，調查員工憂鬱及疲勞指數，進行壓力及過勞管理，對於高風險族群，個別訪談關心，並提供外部諮商資源協助。每週二次視障按摩服務，舒緩酸痛問題及減低壓力。

5.7.2 Health Promoting Programs

5.7.2.1 2012

Lower risks of metabolic syndromes and cardiovascular diseases, advocating power walking habits.

- Weight loss classes - a three month collaboration with Chang Gung Hospital, offering seminars and encouraging power walking; physiological and biochemical indexes indicated great improvement which, in turn, inspired employees to persevere.
- Power walking - twice a week spanning 6 months, providing employees with a healthy habit of exercising.

5.7.2.2 2013

To care for both the physical and mental health of our employees, Nuvoton has planned and prepared various health promoting activities.

- Smoking cessation classes - spanning 13 weeks with 33 participants, 11 of which have successfully quit smoking while more than half (58%) of other employees reduced the amount of cigarettes they smoke.
- Stress relief plans - regular surveys investigate fatigue and depression indexes, and pressure and overwork managements were conducted; specific to high risk groups, individual visits were paid and external consulting resources provided. Massages by the visual impaired twice a week alleviate soreness and relieves stress.



健走活動

Walking



健走活動

Walking

6. 客戶服務與供應商管理

6.1 客戶服務與滿意

6.1.1 新唐科技在建立確保超大型積體電路產品的品質和可靠性，完全滿足客戶的需要，致力交付「零缺點」具競爭力產品，生產過程控制包括：品質控制、可靠性保證與失敗分析。

6.1.1.1 品質控制

新唐科技實施一系列的品質控制機制，涵蓋生產製程的每一步驟。品質控制作業的主要步驟包括：進料檢查、晶圓製造流程、電性特性測試、晶粒封裝。

新唐科技透過不斷地監控製造流程的每一步驟，收集每一層面回饋資訊，可快速且有效率地偵測問題、評估分析和矯正量度。強調在製造流程的每一步驟都採「第一次就做對」的態度，同時創造「零缺點」的產出，由此建立一條高品質與可靠性的產品生產線。

6.1.1.2 可靠性保證

在新唐科技，可靠性保證測試的目標，須確保涵蓋產品可預期的生命週期。每一製造階段都經歷持續地檢討、分析和評估，並隨同修正，可提供日後品質與可靠性的改進。

客戶可將不良品退回新唐，新唐科技會與客戶討論出最適當方式給予換貨、補貨或折讓，以補償客戶的損失。同時，新唐科技亦會針對有缺點的 IC，進行完整的電性與物理特性檢查，進行失效分析，確定產品失敗的根由，以採取矯正行動及改善措施，並密切監控以確保改善措施能有效地實施，並提供客戶詳細的失效分析書面報告，以幫助客戶了解新唐的產品與可靠性。

6. Customer Service and Supplier Management

6.1 Customer Service and Satisfaction

6.1.1 Nuvoton guarantees that the quality and reliability of its products manufactured through very-large-scale integration (VLSI) will completely satisfy the needs of its customers. Nuvoton is committed to delivering competitive products with "zero defects". The manufacturing process control includes: quality control, reliability assurance, and failure analysis.

6.1.1.1 Quality Control

Nuvoton implements a series of quality control mechanisms that covers every step of the production process. The main steps to its quality control operations include: raw material inspection, wafer fabrication process, electrical characteristics test, and die packaging.

Nuvoton continuously monitors every step of the manufacturing process. By doing so, Nuvoton is able to gather information about every layer of feedback, detect problems quickly and efficiently, and conduct an assessment analysis followed by corrective measures. The company emphasizes that every step of the manufacturing process must be "done right the first time" to result in an output with "zero defects", thereby establishing high-quality and reliable product lines.

6.1.1.2 Reliability Assurance

At Nuvoton, the purpose of the reliability assurance test is to ensure that the product will be able to last through its expected life cycle. Each stage of manufacturing continuously undergoes review, analysis, evaluation, and subsequent revision to serve as a basis for future improvements to quality and reliability.

Customers may return defective products to Nuvoton. In the event of this, Nuvoton discusses with the customer the most appropriate method to replace, replenish, or offer a discount to compensate for any loss incurred by the customer. Meanwhile, Nuvoton completes a comprehensive physical and electrical test as well as a failure analysis on any defective integrated circuit (IC) to determine the root causes of product failure, and respond with corrective actions and measures for improvement. Furthermore, Nuvoton closely monitors this process to ensure that measures for improvement are effectively implemented, while providing customers with a detailed written report of the failure analysis to help customers learn more about the products and reliability of Nuvoton.

6.1.2 在客戶申訴管道上，新唐科技為了解客戶的意見，定期實施客戶滿意度調查，以了解新唐科技是否提供令客戶滿意的產品與服務，並將結果交付管理階層，作為調整資源改善滿意度的參考依據。調查範圍包括：新產品行銷、銷售、交貨、品質及改善、技術支援、服務溝通。

6.1.3 2012 年至 2013 年指標

6.1.3.1 違反有關產品和服務之健康與安全和自願性準則(產品和服務處於其生命週期內)的事件總數：0 件

6.1.3.2 經證實侵犯客戶隱私權及遺失客戶資料的投訴總數：0 件

6.1.3.3 違反有關提供及使用產品與服務法律和法規，相關重大罰款的總金額：0

6.1.3.4 客戶滿意度調查結果：90% 客戶在服務溝通給予滿意評價(4 分以上)，75% 客戶滿意所提供之技術支援。

評分最低：1 分，最高：5 分，等級區分為(1) 非常不滿意、(2) 不滿意、(3) 普通、(4) 滿意、(5) 非常滿意

G4-PR2, G4-PR5, G4-PR8, G4-PR9

6.1.2 Through customer complaint channels, Nuvoton regularly conducts surveys to gain insight into the level of customer satisfaction regarding its products and services. The results of these surveys are delivered to the management level to serve as reference for adjusting resources to improve customer satisfaction. The scope of these surveys includes: new product marketing, sales, delivery, quality and improvement, technical support, and service and communication.

6.1.3 Indicators for 2012 - 2013

6.1.3.1 Total number of occasions in which products or services have violated relevant health, safety, and voluntary guidelines (products and services still within their life cycle): 0.

6.1.3.2 Total number of complaints for proven breaches of customer privacy or loss of customer data: 0.

6.1.3.3 Total number of significant fines due to violations of the law and/or regulations regarding the distribution and/or use of products or services: 0.

6.1.3.4 Customer Satisfaction Survey Results: 90% of customers gave satisfied ratings (4 and above) for service and communication. 75% of customers reported to be satisfied with the level of technical support.

Lowest rating: 1. Highest: 5. Ratings are classified as follows: (1) Very Unsatisfied, (2) Unsatisfied, (3) Average, (4) Satisfied, (5) Very Satisfied.

G4-PR2, G4-PR5, G4-PR8, G4-PR9

6.2 供應鏈管理

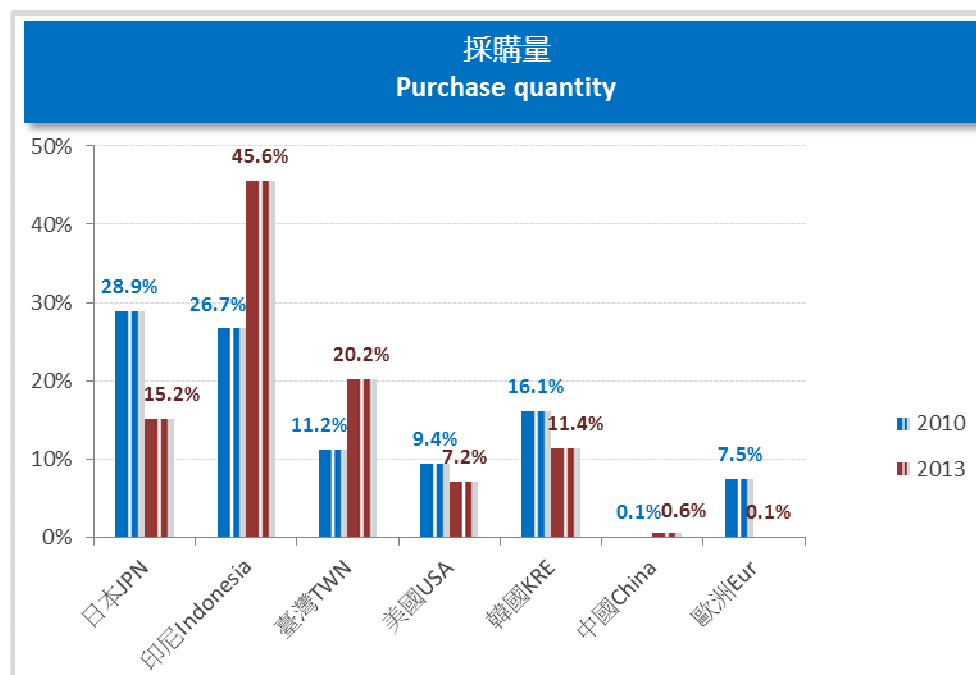
6.2.1 供應鏈管理策略

新唐科技自成立以來，一直將供應商視為長期合作夥伴，以建立半導體長期穩健供應鏈為共同目標。近年來致力於原物料在地化生產，其目的在於減少運輸成本、分散風險及減少碳排放量，更希望能藉由扶植在地生產，以增加就業機會，故臺灣當地採購量自日本311地震以前之11.2%增加至20.0%。未來更希望繼續扶植供應商在地化生產，在雙贏的前提下共同為降低成本及風險而持續努力。 G4-13

6.2 Supply Chain Management

6.2.1 Supply Chain Management Strategy

Since its inception, Nuvoton has always considered its suppliers as long-term partners towards achieving the common goal of establishing a stable semiconductor supply chain. In recent years, Nuvoton has been committed to the local production of raw materials for the purpose of reducing transportation costs, diversifying risk, and reducing carbon emissions. Furthermore, Nuvoton hopes to increase employment opportunities by cultivating local production. As a result, the amount of local procurement in Taiwan has been able to increase from 11.2% to 20.0% since the 311 Japan Earthquake. Nuvoton hopes to continue cultivating local production through its suppliers, while striving to reduce overall costs and risks together by achieving win-win situations. G4-13



6.2.2 供應鏈管理方針

新唐科技致力於企業社會責任的推展，除了品質、交期與價格外，更包含以下供應商管理方向：

- 除符合工安環保要求外，更擴大為要求供應商一同重視與推動企業社會責任。
- 基於保障人權的原則，新唐科技重視衝突金屬議題，致力避免產品原料與生產過程中，使用到違反人權之非法採礦之金屬。
- 新唐科技關注供應鏈的勞工權益，要求供應商之營運皆需符合其營運所在國之相關法令及相關國際行業行為規範之要求，包括「電子工業行為準則」(EICC) 及該準則之任何變更、修訂。

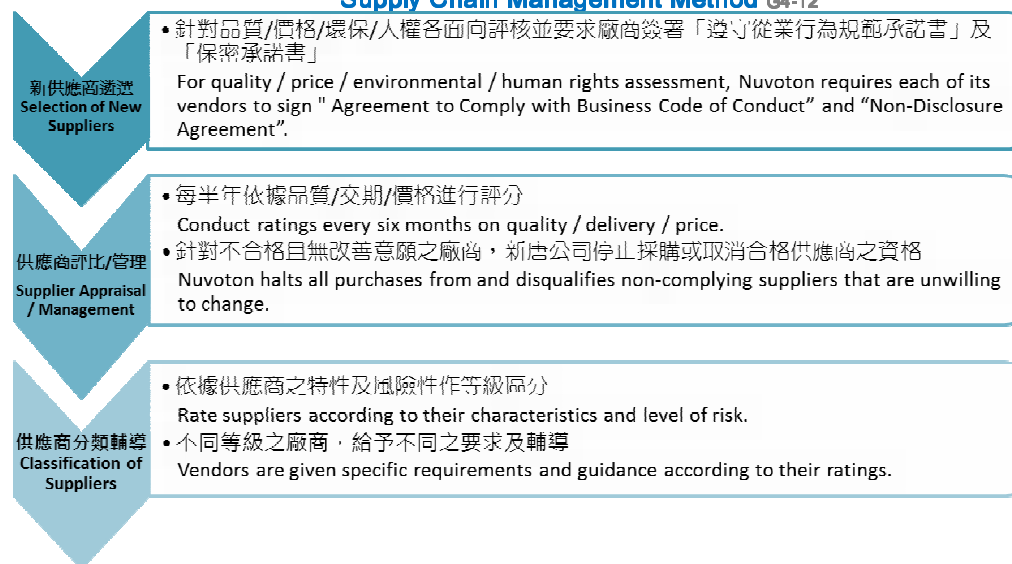
6.2.2 Supply Chain Management

Nuvoton stands firm in its commitment to promoting corporate social responsibility. In addition to the factors of quality, delivery, and price, Nuvoton also takes the following approaches to manage its suppliers:

- In addition to complying with industrial safety and environmental protection requirements, Nuvoton also requires suppliers to focus on promoting CSR together.
- Based on principles for the protection of human rights, Nuvoton pays close attention to the issue of conflict minerals. For the raw materials in its production processes, Nuvoton is committed to avoiding the use of minerals obtained from illegal mining operations that stand in violation of human rights.
- Nuvoton pays close attention to how labor rights are respected throughout its supply chain, and requires suppliers to comply with the laws of the countries they operate in and relevant international industry practices, including the standards defined by the “Electronic Industry Code of Conduct (EICC)” as well as any subsequent changes or amendments.

供應鏈管理方式

Supply Chain Management Method G4-12



6.2.3 供應鏈管理方式

新唐科技供應商管理方式，以下列三大面向進行控管與輔導，以建立永續成長之供應鏈管理機制。

6.2.3.1 新供應商之遴選

依據新唐科技內部規章，我們以品質、價格、環保及勞動人權進行評核，符合公司要求條件者，方能成為新唐科技之合格供應商。

- **環境管理系統認證**

新唐科技要求其供應鏈廠商必須取得國際的認證，例如ISO 14001或OHSAS 18001等環保、安全衛生管理系統，如無法及時取得者，亦要求其訂定取得認證時程表。

- **道德面要求**

要求所有供應鏈廠商共同簽署「遵守從業行為規範承諾書」及「保密承諾書」內容要求廠商必須忠實地執行各項買賣及交易行為，不得損及新唐科技利益及形象。

- **社會面要求**

關注供應商勞工人權：新唐科技積極採用「電子行業行為準則」(EICC)的標準，要求自身供應鏈的廠商需符合其在環保、安全衛生、勞工人權與勞動條件的要求。在供應商每半年評核項目中，結合採購力量，要求供應商落實環境與社會要求標準。

6.2.3.2 供應商評比

依據新唐科技內部規章，我們透過QCDSS評核，每半年進行業務檢討報告，檢討供應商在品質、交期及永續經營能力等的整體表現。更藉此要求供應商持續改善，以符合新唐科技對供應商的要求。

6.2.3 Methods for Supply Chain Management

To establish a supply chain management system with a sustainable level of growth, Nuvoton utilizes the following three approaches for management control and guidance:

6.2.3.1 Selection of New Suppliers

In accordance with Nuvoton's internal regulations, we assess the factors of quality, price, environmental protection, and labor rights in selecting vendors. Vendors must meet our requirements to become a qualified supplier for Nuvoton.

- **Environmental Management System Certification**

Nuvoton requires its supply chain vendors to obtain international certifications, such as ISO 14001, OHSAS 18001, and other environmental, safety, and health management systems. If a vendor is unable to obtain certification immediately, they are required to establish a schedule to do so.

- **Ethical Requirements**

Nuvoton requires each vendor to sign "Agreement to Comply with Business Code of Conduct" and "Non-disclosure Agreement", which compel them to trade and transact honestly without undermining the interests or image of Nuvoton.

- **Social Requirements**

Examining the labor rights practiced by vendors: Nuvoton actively uses the standards of the "Electronic Industry Code of Conduct (EICC)". Nuvoton requires its supply chain vendors to meet its requirements in regards to the environment, health and safety, labor rights, and working conditions. For its supplier assessment program every six months, Nuvoton leverages its procurement power to require suppliers to comply with environmental and social standards.

6.2.3.2 Supplier Appraisals

In accordance with the internal policies of Nuvoton, we conduct business review reports every six months to review suppliers' overall performance in regards to quality, delivery, and sustainable management capabilities through our QCDSS assessment. Furthermore, Nuvoton requires vendors to continuously improve and meet its requirements for suppliers.

6.2.3.3 供應商分類輔導

- 管理對象：各類生產相關原物料之供應商
- 管理單位：MRB管理委員會
- 管理做法：
 - 每半年向各相關單位收集供應商之表現狀況，並進行評分
 - 對於海外供應商每三年執行供應商問卷調查
 - 在地廠商每三年一次至現場評核或邀請其進行品質簡報
- 評核項目：「永續指標」、「品質指標」、「價格指標」、「交期指標」、「服務指標」共五項，其中「永續指標」參照企業社會責任承諾做為評核基準，以敦促他們保護環境、改善安全與衛生、尊重保障勞動人權，共同善盡企業社會責任。

6.2.4 供應商風險管理

供應商穩定供貨是競爭力的重要一環，在全球化的趨勢下，任何地方發生重大天災或意外事故均會影響供應鏈之穩定供貨，故對於材料來源，我們秉持著「多地供貨」原則。重要原物料與廠商簽定長期供貨合約，除建立自有庫存外，更以寄庫(consignment)方式讓供貨零風險。如無法建立第二供應商之材料，則要求廠商在產地及代理商備妥安全庫存，以準時生產(Just in time, JIT)方式降低供貨風險。

6.2.3.3 Guidelines for Classifying Suppliers

- Management subjects: Various types of production-related raw materials suppliers.
- Management unit: MRB Management Committee
- Management practices:
 - Collect information on the performance of suppliers from all relevant units and rate them accordingly.
 - Conduct surveys on overseas suppliers every three years.
 - Conduct site assessment on domestic manufacturers every three years, or invite them to hold presentations on quality.
- Assessment items: "Sustainability Index", "Quality Indicators", "Price Index", "Delivery Targets", and "Service Indicators". Amongst these five items, "Sustainability Index" serves as a benchmark for assessing the CSR commitments of vendors, and urging them to protect the environment, improve levels of health and safety, respect labor rights, and work together to fulfill CSR duties.

6.2.4 Supplier Risk Management

Vendors with stable levels of supplies are an important part to maintaining competitiveness. With current degrees of globalization, a natural disaster or accident might affect the stability of the entire supply chain. As a result, we uphold the principle of "many suppliers from many locations" in establishing sources for materials. Long-term agreements with major raw material suppliers not only helps increase our own inventory, but also enables zero risk delivery through consignment. If we are unable to establish a second supplier for a particular material, then we request vendors and distributors to prepare safety stock, while using the Just-in-time (JIT) method to reduce supply risk.

7. 社會參與

7.1 人才培育

7.1.1 大學計劃

新唐科技自 2011 年起即積極展開培育具創新思維之下一代工程師校園計劃，透過提供「新唐 ARM® Cortex®M 系列微控制器教學平台」、相關之免費軟體開發環境及驅動應用程式予亞太地區大專校院學生學習，協助學生在學期間即能學習目前業界主流的開發產品及平台，此舉除能快速提升學生的就業競爭優勢、推動產學合作及協助學生就業接軌，更期望學生能透過這些學習工具為日新月異的世界，開發出下一代令人眼睛為之一亮的創新產品。

我們於 2013 年前完成捐贈學校教學平台之學校摘錄如下：

- 國內：國立交通大學、國立臺灣科技大學、國立中央大學、國立屏東科技大學、中原大學、亞洲大學、正修科技大學、國立臺灣海洋大學、虎尾科技大學、亞東技術學院、聖約翰科技大學、樹德科技大學、彰化師範大學、明新科技大學、第一科技大學、南台科技大學、龍華科技大學等
- 海外：University of Tun Hussein Onn Malaysia, University of the Philippines Los Baños, Manipal University, Sri Ramaswamy Memorial University, Kasetsart University, Ho Chi Minh City University of Technology, University of Malaya, Hanoi University



新唐科技捐贈彰化師範大學「微控制器教學模組」，培育國家優秀科技人才，共創產學雙贏。

Nuvoton donated a "Microcontroller Educational Module" to National Changhua University of Education to cultivate new national talents in technology and create a win/win situation through academic-industry collaboration.

7. Social Engagement

7.1 Cultivating Talent

7.1.1 University Projects

Since 2011, Nuvoton has been actively conducting its Next Generation Engineers on Campus Plan to cultivate innovation. Through the "Nuvoton ARM® Cortex®M Series Microcontroller Educational Platform", the company provides free software development environments and driver application programs for students at specialized colleges throughout the Asia-Pacific region to teach them about current mainstream products and platforms of the industry. This project helps student rapidly raise their competitiveness in seeking jobs, promotes industry-academic collaboration, and aids students in transitioning into the workplace. Furthermore, in this ever changing world, we hope that students may utilize these learning tools to develop innovative products that may inspire following generations.

In 2013, we donated our educational platform to the following universities:

- Domestic universities - National Chiao Tung University, National Taiwan University of Science and Technology, National Central University, National Pintung University of Science and Technology, Chung Yuan Christian University, Asia University, Cheng Shiu University, National Taiwan Ocean University, National Formosa University, Oriental Institute of Technology, St. John's University, Shu-Te University, National Changhua University of Education, Mingshin University of Science and Technology, National Kaohsiung First University of Science and Technology, Lunhua University of Science and Technology
- Foreign universities - University of Tun Hussein Onn Malaysia, University of the Philippines Los Baños, Manipal University, Sri Ramaswamy Memorial University, Kasetsart University, Ho Chi Minh City University of Technology, University of Malaya, Hanoi University

7.1.2 校園參與

新唐科技為向下紮根，亦協助政府進行職訓計劃，與自強基金會合作進行韌體工程師培訓；與臺灣科大、城市科大合作進行偕同教學，幫助莘莘學子與產業無縫接軌；並與臺灣海洋大學、虎尾科技大學等學校進行產學合作，積極協助學校，使研發成果更具市場性與前瞻性。

7.1.3 獎助學金計劃

新唐科技為善盡企業公民之責任，回饋社會，自 2013 年起成立「新唐科技股份有限公司獎助學金」，期望能培育 IC 設計領域尖端人才並獎勵優秀學子敦品勵學，2013 年共計錄取 8 名學子。

7.1.4 參與公益

本公司善盡企業公民之責任，報告期間捐贈電腦予新竹市慈善機構、響應媒體籌辦「2013 企業聯合溫暖送愛心」活動、贊助德國舉辦之「6th Golf Charity」，參與新竹縣政府發起之「送月餅到原鄉」之活動，並將汰換但仍舊完好的桌椅，捐贈給慈善機構，發揚環保及物盡其用的精神，同仁並主動辦理捐款援助 311 日本核災等自發性活動，以實際的作為表達我們對世界的關懷。

7.1.2 Campus Participation

To plant deep roots, Nuvoton also assists the government in vocational training programs. Working alongside Tse-Chiang Foundation of Science and Technology, we conduct collaborative training sessions for firmware engineers. With National Taiwan University of Science and Technology and Taipei Chengshih University of Science and Technology, we help students prepare for a smooth transition into the industry. Through academic-industry collaboration with National Taiwan Ocean University, and National Formosa University, we actively assist universities in providing market-oriented insight into their research and development efforts.

7.1.3 Scholarship Programs

To fulfill our duties as corporate citizens and give back to society, we established the “Nuvoton Company Scholarship” in 2013 to cultivate talents in IC design, and award outstanding students for their good conduct and studiousness. A total of 8 students were listed in 2013.

7.1.4 Philanthropy

Our company duly fulfills its responsibilities as corporate citizens. Within the time frame of this report, we donated computers to charities in Hsinchu, contributed to the media event, “2013 Corporate Alliance Warm Hearts Delivery”, sponsored the “6th Golf Charity” organized by Germany, participated in the Hsinchu Government-hosted event, “Send Moon Cakes Home”, and donated intact desks and chairs to charities, while making full use of recyclable objects through a spirit of an environmental conservation. Our employees also took it upon themselves to donate aid to the victims of the Fukushima Nuclear Disaster. Indeed, we express our care for the world through action.

7.2 藝文推廣

新唐科技亦致力帶領同仁從生活中培養美學，與外部機構合作，辦理生活美學講座，從天文美學，談到教養美學、健康美學，邀請劉炯朗、洪蘭、黃春明、方力行、劉克襄、王寶勛、林煥彰、陳銘礪、陳月卿等講師，提供同仁美學經驗和生活智慧；另辦理音樂美學講座，從西方交響樂演繹到中國音樂美學，幫助同仁進入美學音樂的世界，新唐科技除幫助同仁體會生活美學外，亦希望同仁看到臺灣之美，故辦理「看見臺灣」電影欣賞活動。

我們致力推廣藝文活動，除希望讓同仁從生活建立美學觀念外，更重要的是我們希望能推廣藝文活動，讓美學在同仁心中發芽，逐漸成長茁壯，成為生活習慣，未來同仁可常態性地參與藝文活動，此循環將可以為藝文活動注入活水，讓臺灣藝文活動蓬勃發展，亦可讓同仁在工作之外，汲取人文之美。

7.2 Cultural Advocacy

Nuvoton is committed to leading our employees in cultivating aesthetics from daily life. Collaborating with outside institutions, we have held seminars on aesthetics in life, including in astronomy, culture and health. These events has invited prestigious figures in the art world, such as Chung Laung Liu, Daisy L. Hung, Huang Chunming, Liu Ka-Shiang, Wang Baoxun, Mingpan Chen, and Chen Yueqing, to serve as lecturers. Also, we host seminars on musical aesthetics, from western symphonies to traditional Chinese music, to guide our employees into the lovely world of music. In addition to helping our employees enjoy the aesthetics in life, we also hope to open their eyes to the beauty of Taiwan, which led us to organize a “Beyond Beauty - Taiwan From Above” movie appreciation event.

We are dedicated to the promotion of cultural events. Not only do we hope that our colleagues learn to establish aesthetic concepts through daily life, but also through our advocacy of cultural events, a seed for aesthetics may be planted in the hearts of our employees, a seed that will gradually grow and flourish into a way of life. In the future, our colleagues may participate regularly in cultural activities, imbuing the cultural world with fresh water - a nourishing cycle that with help drive cultural development in Taiwan, and allowing our colleagues to absorb the beauty of culture.

8.環境保護

新唐科技致力於成為環境永續發展之綠色企業，遵循環境法規及相關之國際準則規範，我們承諾：持續改善，透過源頭減量及全員參與來降低生產對環境的影響，盡力杜絕任何可預見的環境污染風險，適切地保護自然環境，在執行業務與活動的同時，努力追求經濟、社會與環境生態的平衡發展。

8.1 環境保護管理

8.1.1 環安衛管理系統

新唐科技為貫徹：「持續改善，以成為永續發展之綠色企業」的目標，導入 ISO 14001 及 OHSAS 18001 的 P-D-C-A 持續改善精神來建立我們的環安衛管理系統，遵守環保法令並透過製程最佳化及全員的參與，不斷降低關鍵性原物料的使用與減少污染物的排放。我們並於 2008 年新唐科技成立時，通過 ISO 14001 及 OHSAS 18001 之認證。

除了透過日常管理組織推動環境管理相關業務之外，我們另成立「環安衛暨風險管理委員會」，定期針對法規的符合性、利害關係人關心議題、環境持續改善方案進行檢討，委員會下並設立特定功能小組，如節能與溫室氣體減量等小組，研擬重要環境議題的減量目標與方針，並推行各項相關減量方案。

8. Environmental Protection

Nuvoton is committed to becoming a green business with a sustainable level of development that complies with environmental laws, regulations, and international standards. We promise: Continuous improvement through source reduction, and company-wide participation in lowering the environmental impact of production. We will do our best to eliminate foreseeable risks of causing environmental pollution and to protect the natural environment. In our business operations and activities, we will continue striving to achieve a level of development that balances economic, social, and ecological factors.

8.1 Environmental Management

8.1.1 Environment, Safety, and Health (ESH) Management System

Nuvoton practices: "Continuous improvement to become a green business with a sustainable level of development." Nuvoton draws from the P-D-C-A cycle of ISO 14001 and OHSAS 18001 to infuse a spirit of continuous improvement into the construction of its ESH Management System in accordance with environmental regulations. Through process optimization and company-wide participation, we continue to reduce the use of key raw materials and the emission of pollutants. In fact, when Nuvoton was founded in 2008, it received the ISO 14001 and OHSAS 18001 certifications.

In addition to promoting environmental management-related business through daily management, we have also set up an "ESH and Risk Management Committee" to review compliance with regulations, stakeholders' concerns, and programs for continuous environmental improvement. The committee has organized specific groups, such as the energy-saving and greenhouse gas reduction group, to research reduction targets and guidelines for important environmental issues, and implement various related reduction programs.

8.1.2 環保資源投入

新唐科技為提供及維護一個合於法令要求及工業實務的生產環境，我們投資於污染防治設備之初設累計費用為新台幣 209,555 仟元。 **G4-EN31**

8.1.2 Environmental Resource Investment

To provide and maintain a work environment and quality of production that comply with statutory requirements and industry practices, Nuvoton has invested an accumulated total of NTD 209,555,000 for the preliminary design of pollution control equipment. **G4-EN31**

污染防治設備初設累積投資成本(單位:新台幣仟元)

Cumulative Cost for the Preliminary Design of Pollution Control Equipment (Unit: Thousand NT\$)

	項目 Item	金額(仟元) Amount (Thousand NTD)
污染防治設備最初設置費用 Cost of Preliminary Design of Pollution Control Equipment	空污最終處理設備 Air Pollution Final Processing Equipment	126,152
	其他空污中間處理設備 Other Air Pollution Intermediate Processing Equipment	23,126
	空污處理監測設備 Air Pollution Treatment and Monitoring Equipment	5,507
	廢水處理設備 Wastewater Treatment Equipment	32,772
	廢水處理監測設備 Wastewater Treatment and Monitoring Equipment	3,811
	廢棄物收集貯存設施 Waste Collection and Storage Facilities	12,295
	其他(監測井 毒化物監測等) Other (Monitoring Wells to Monitor Toxic Chemicals, Etc.)	5,892
	合計 Total	209,555

我們每年仍不斷地在操作維護、檢測監控及管理成本上投入費用，以確保各項防制設施能夠正常運轉，透過各項檢測與監測的管理，務求發生偏差時能夠即時予以矯正，避免增加環境的負荷，並視實際需求增設相關污染預防及節能減廢設備，以因應法令的變動及持續改善的需求。

Every year, we continuously invest funds to cover operation, maintenance, inspection, monitoring, and management expenses to ensure the normal operation of various control facilities. Through the management of various detection and monitoring tools, we are able to correct potential deviations instantly upon detection, and reduce environmental damage as a result. Furthermore, depending on actual need, we will set up additional pollution prevention and waste reduction equipment to respond to any changes in laws and requirements for continuous improvement.

2012 年及 2013 年環保支出(仟元)

2012 and 2013 Environmental Protection Expenditures (Thousand NTD) G4-EN31

項目 Item	2012	2013
空氣汙染防制費用 Air Pollution Control Expenditures	21,506	21,599
水汙染防治費用 Water Pollution Control Expenditures	11,791	11,040
廢棄物處理費用 Waste Disposal Expenditures	2,683	2,730
環境監測費用 Environmental Monitoring Expenditures	2,240	2,239
環境管理費用 Environmental Management Expenditures	2,278	2,546
環境補救成本 Environmental Remediation Expenditures	0	0
合計費用 Total Expenditures	40,498	40,154

8.2 污染預防

面對人類活動遽增，地球資源迅速耗竭，而大量資源耗用往往伴隨的是嚴重污染，地球環境越趨惡劣，新唐科技的污染預防工作，是以「珍惜資源的使用」及「減少污染的排放」兩個方向來推行，我們本著友善對待環境的態度，努力降低生產活動對環境的衝擊。

8.2.1 珍惜資源

8.2.1.1 節約能源

新唐科技目前使用的能源，以外購電力為主，其次為天然氣，再者為少量的柴油與汽油。因為臺灣大部分的電力及氣體能源都來自不可再生的化石燃料，例如煤和石油，其於開採殆盡後，將不能得以補充；此外燃燒化石燃料產生污染問題，不但會影響環境，更會破壞大自然的複雜調控機制，引發地球氣候反常，因此節約能源議題，每一個企業都不能置身事外。

新唐科技主要的節能策略是減少使用需求及提升運轉效率。在電力使用上，我們進行調整晶圓廠、測試廠、成品及原物料庫房溫度範圍及晶圓廠無塵室最適風速調整，檢討工廠照明需求，更新照明配置並逐步替換成 LED 照明等措施，以降低用電量；在天然氣使用上，則採降低有機廢排氣燃燒溫度及進行廢熱回收以降低天然氣使用量。提高用電效率部分，設置冰水機、空壓機及排氣風車變頻器，進行冰機冷卻水塔定期除菌處理、更換冷卻水塔散熱材，無塵室清潔排氣引至冷卻水塔提高散熱效率等措施，以提升用電效率。

8.2 Pollution Prevention

As human activity increases dramatically, the earth's resources are being rapidly depleted. This large-scale consumption of resources is often accompanied by severe pollution. In an increasingly harsher global environment, Nuvoton's plan for pollution prevention is to implement two approaches: "cherishing resources" and "reducing emissions". With a friendly attitude towards the environment, we strive to reduce the environmental impact of our production activities.

8.2.1 Cherishing Resources

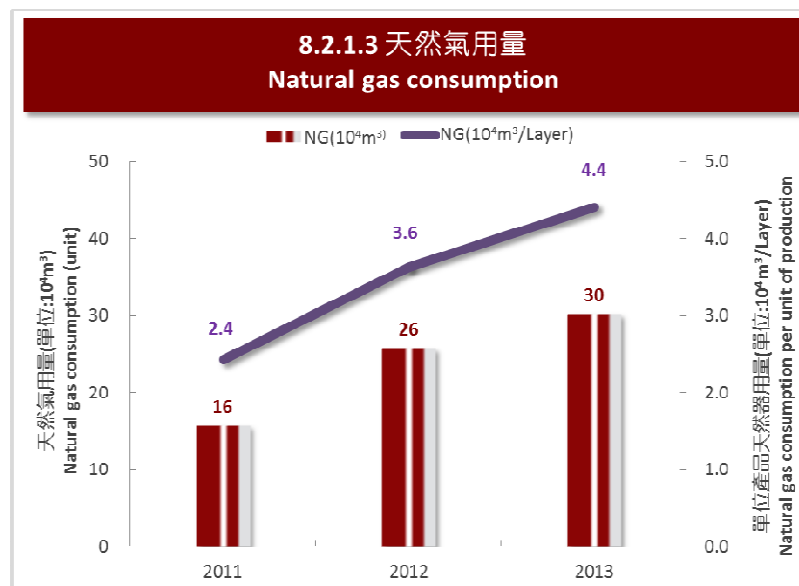
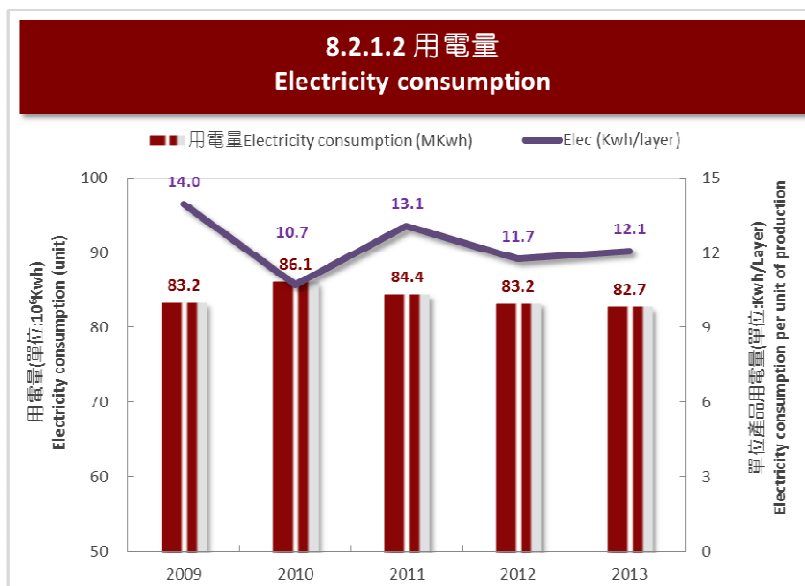
8.2.1.1 Energy Conservation

Nuvoton mainly draws its energy from purchased electricity, followed by natural gas and a small amount of diesel fuel and gasoline. The majority of Taiwan's electricity and gas energy is derived from non-renewable fossil fuels, such as coal and petroleum, which cannot be replenished after they are mined. Furthermore, pollution generated by the burning of fossil fuels will not only affect the environment, but also destroy the complex regulatory mechanisms of nature, causing climate anomalies. Thus, energy conservation is an issue that no business can afford to avoid.

Nuvoton's main energy conservation policy is to reduce the demand for energy and improve operating efficiency. For the consumption of electricity, we are making adjustments to our semiconductor foundry, testing facilities, finished products, temperatures of our raw material warehouses, and the optimal wind speed for the cleanrooms in our semiconductor foundry. By reviewing the lighting requirements of our foundry, we are able to update lighting configurations and gradually replace them with LED lighting, as well as other measures to reduce electricity consumption. Furthermore, we are reducing the temperature of combustion for organic waste exhaust and recycling waste heat to reduce the overall use of natural gas. To improve electrical efficiency, we have setup chiller units, air compressors, and frequency converters for exhaust turbines. We also regularly sterilize the cooling towers of the chiller units, replace their heat dissipation materials, clean out the exhaust from cleanrooms to improve the efficiency of cooling towers, and other practices to improve electrical efficiency.

辦公區域進行冰水壓力調整、空調開關設定溫度下限避免溫度設定過低、三樓西曬辦公室加貼隔熱紙降低夏季空調耗電量，檢討照明需求調整照明配置及逐步更換 LED 燈，下班關燈及關機以減少辦公區耗電。積極推動節能的結果，相對 2009 年單位產品用電量，2013 年降低幅度已經超過 10%。

Adjustments for cold water pressure are conducted for office areas. Air conditioning panels have programmed limits to prevent overly low temperature settings. Insulation paper is affixed to a third-floor office area exposed to sunlight from the west to reduce electricity consumption during the summer. Following reviews of lighting requirements, lighting configurations are adjusted and gradually replaced with LED lights. After work hours, lights and machines are shut off to reduce electricity consumption in the office area. By actively promoting energy conservation, we have been able to reduce the power consumption per unit of product by more than 10% in 2013, relative to 2009.



新唐科技自 2011 年 4 月起使用天然氣，2013 年 8 月並增加配管至廚房使用。Nuvoton has been using natural gas since April of 2011. In August of 2013, piping was added to the kitchen.

8.2.1.4 節約用水

臺灣地區雨勢集中，再加上山坡陡峭河川短促，所以大部分的雨水都迅速地流入海洋，造成水資源匱乏。因此節約用水成為臺灣企業重要的議題，新唐科技的用水來源是自來水公司所提供之自來水，並有回收少量的雨水及冷凝水作為次級用水使用，我們節省水的策略是優先進行減少用量，再配合回收使用以降低水資源之耗用。

我們進行製程用水最適化之清洗流率及調整換水頻率，延長對純水系統逆洗頻率，及生活用水加裝節水設施以減少水量。對於各設施及製程排放水，依照其水質分級收集利用，回收後潔淨程度較佳的水質經處理供予製程使用，潔淨程度次佳的水質則作為冷卻水塔補充用水、廢氣洗滌塔等次級用水使用，另外我們也設置空調設施冷凝水及雨水收集系統，回收之冷凝水及雨水亦作為次級用水使用。由於新唐科技廠辦為早期建造之廠房，易出現管路修改困難及已無空間設置回收處理設施的瓶頸，但在我們努力提升用水回收量下，目前回收率已遠高於「新竹科學工業園區廠商建廠時間對應回收率標準」。相對 2009 年單位產品用水量，2013 年降低幅度也已超過 20%。 G4-EN22

2012 及 2013 年用水回收率
2012 and 2013 Water Recycling Rates

回收率 Recycling Rate	2012	2013	回收率標準 Recycling Rate Standard
製程用水回收率 Recycling Rate for Process Water	68.1	69.2	>50%
全廠用水回收率 Recycling Rate for Water for the Entire Foundry	63.1	62.6	>30%

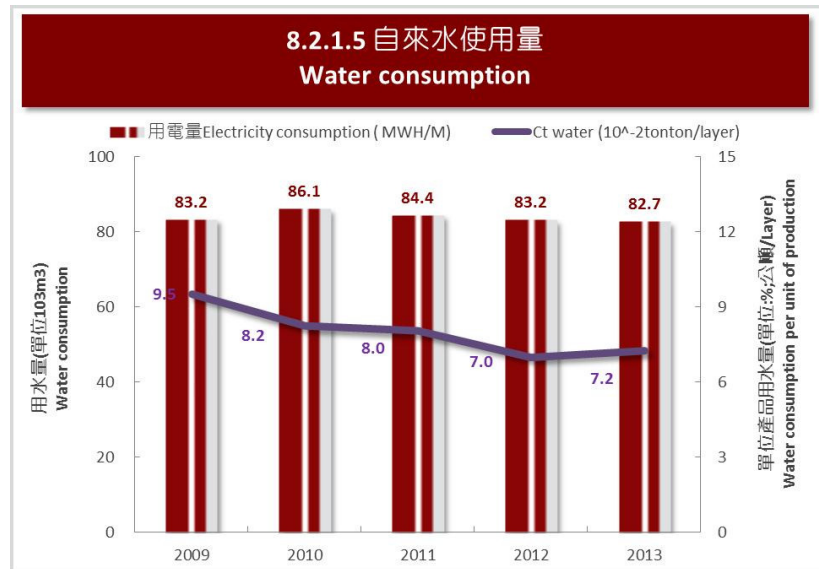
註：回收率標準為「新竹科學工業園區廠商建廠時間對應回收率標準」中 1994 年以前設廠之標準。

Note: "Recycling Rate Standard" refers to the "Recycling Rate Standard for Hsinchu Science Park Vendors Corresponding to Factory Construction Time" for factories established before 1994.

8.2.1.4 Water Conservation

Taiwan is an area that experiences concentrated amounts of rainfall. Additionally, due to the fact that the steep slopes of its rivers are relatively short, most rainwater quickly dissipates into the ocean, resulting in a scarcity of water resources. As a result, water conservation has become an important issue for Taiwanese enterprises. Nuvoton uses the tap water provided by the Taiwan Water Corporation. Furthermore, Nuvoton recycles a small amount of rain and condensate to use as a secondary water source. With a focus on conservation, our water conservation strategy is paired with recycling measures to reduce the overall consumption of water resources.

We optimize the process water flow rate and adjust the frequency of water changes to extend the back wash frequency of the water purification system. We have also installed water-conservation facilities to reduce the amount of regular water consumption. We gather and utilize various facilities to process waste water in accordance with water quality classifications. After recycling, water with high degrees of purity is treated and provided for process use. Water with suboptimal degrees of purity is used for cooling towers, exhaust gas cleaning towers, and other secondary types of water usage. In addition, we have also set up an air conditioning condensate and rainwater collection system. The recycled condensate and rainwater are reserved for secondary types of water usage. Since Nuvoton's foundry was constructed a relatively long time ago, it has been difficult to modify their piping systems, or install recycling facilities due to limitations in space. But, due to our efforts to increase the amount of recycled water, our current recycling rate is now higher than that of the "Recycling Rate Standard for Hsinchu Science Park Vendors Corresponding to Factory Construction Time". Relative to 2009, the water consumption per unit of product has been reduced by more than 20% in 2013. G4-EN22



8.2.2 減少排放

新唐科技對於污染物排放減少的策略：首重以製程最適化及原物料源頭減量以減少污染物的排出，再透過處理設備將排出的廢氣或廢水處理至符合法規的標準後排放，廢棄物則以再利用的方式處理。

8.2.2.1 空氣污染防治

新唐科技製造的廢氣主要為酸鹼廢氣、有機廢棄及熱排氣，其中熱排氣並不會造成空氣污染，我們依據廢氣的特性分別設置不同的處理設備，由製程設備排出的易燃、有毒的廢氣先以電熱式、吸附式或設置於現場的洗滌設施處理後，與酸鹼廢氣一同排至中央廢棄洗滌塔處理，含有機物質的低濃度廢氣則先以濃縮轉輪吸附後排至焚化爐焚化，高沸點的有機廢氣則以冷凝方式處理。所有排氣之污染物濃度均遠低於規定之廢氣排放標準。

8.2.2 Emissions Reduction

Nuvoton's emissions reduction strategy: First, process optimization and raw material source reduction reduce the amount of discharge of pollutants. Then, treatment equipment is used to process waste gas or water until they are in line with regulatory standards before they are discharged. Waste is processed through methods of reuse.

8.2.2.1 Air Pollution Control

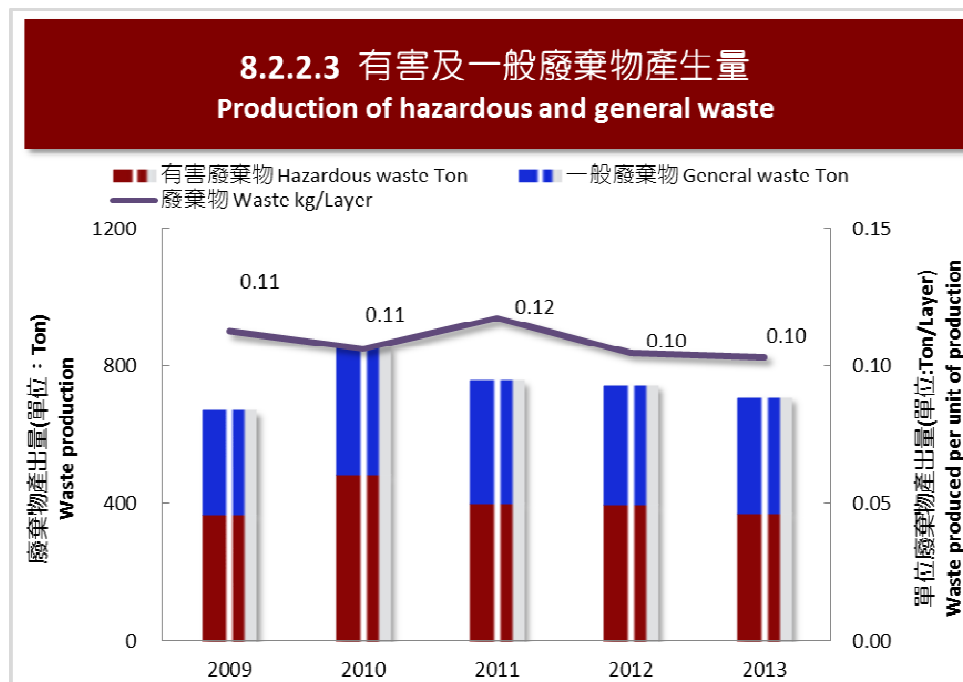
The waste gas generated by Nuvoton is mainly comprised of acid-base exhaust, organic waste, and heat exhaust. Amongst these, heat exhaust does not cause air pollution. We have tailored different processing devices according to the characteristics of waste gas. The flammable and poisonous gases discharged from the processing equipment are first treated through electrothermal methods, absorption, and on-site washing facilities. Afterwards, they are discharged along with acid-base exhaust to the central waste washing tower for processing. Exhaust gas with low concentrations of organic matter are absorbed using a rotor concentrator before being discharged to incinerators. Organic waste with high boiling points is processed through condensation. The pollutant concentration levels of all the exhaust are vastly lower than those prescribed by emission standards.

8.2.2.2 水污染防治

新唐科技製造的廢水主要為製程廢水及生活廢水兩類，製程廢水又分為含氟廢水及酸鹼廢水兩大類，含氟廢水先添加氯化鈣經混凝沉澱處理，酸鹼廢水則先中和處理後排放至新竹科學園工業區污水處理廠處理後再以專管排放至客雅溪，所排放之製程廢水均符合新竹科學工業園區所設定之納管標準。生活廢水部分則直接透過下水道排放至新竹科學園區污水處理廠。

8.2.2.2 Water Pollution Control

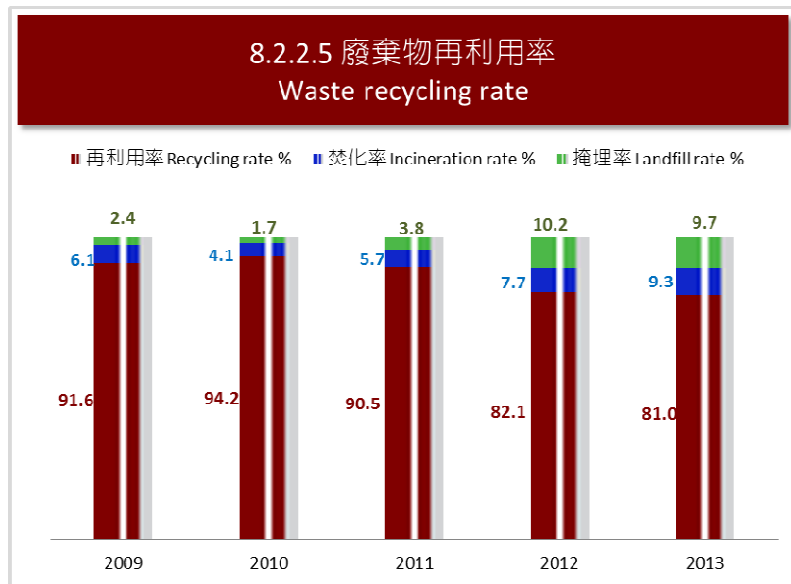
The wastewater produced by Nuvoton is primarily comprised of two types: process and domestic. Process wastewater can be further divided into two categories: fluoride-containing and acid-base. Calcium chloride is first added to fluoride-containing wastewater before undergoing coagulation and sedimentation processes. Acid-base wastewater is first neutralized, then discharged to Hsinchu Science Park's sewage treatment plants for processing. Then, through specialized pipes, it is discharged into Keya Creek. All discharged process wastewater complies with the standards set by Hsinchu Science Park. Domestic wastewater is discharged directly through the sewers to Hsinchu Science Park's sewage treatment plants.



8.2.2.4 廢棄物再利用之種類與用途

8.2.2.4 Waste Reuse Types and Applications G4-EN23

廢棄物種類 Waste Type	再利用說明 Reuse Description
廢硫酸 Waste Sulfuric Acid	廠商回收稀釋成工業級稀硫酸 Vendor recycles and dilutes into industrial-grade sulfuric acid
廢溶劑 Waste Solvents	廠商回收作為焚化爐之輔助燃料 Vendor recycles into auxiliary fuel for incinerators
廢異丙醇 Waste Isopropanol	廠商回收蒸餾製成工業級異丙醇 Vendors recycle and distill into industrial-grade isopropanol
廢 NMP Waste NMP	廠商回收蒸餾製成工業級 NMP Vendors recycle and distill into industrial-grade NMP
活性炭 Activated Carbon	活性炭廠商進行回收再利用 Recycled by activated charcoal vendor
廢化學空桶 Emptied Chemical Waste Barrels	廠商回收清洗後重複使用，或破碎後，作為塑膠原料或玻璃原料 Emptied chemical waste barrels are either washed and reused, or crushed and made into plastic or glass materials.
廢離子交換樹脂 Spent Ion Exchange Resins	廠商回收當成次級之離子交換樹脂使用 Vendor recycles and uses as secondary Ion exchange resins
廢光罩 Waste Photomasks	廠商清洗除去圖樣後，產製成再生光罩或光學材料 After the vendor removes all patterns, waste photomasks are either made into new ones or optical materials.
廢鉛蓄電池 Waste Lead-Acid Batteries	廠商回收，經處理後回收鉛塊、塑膠等 Vendor recycles, and lead blocks, plastic, etc. are recycled after processing
廢混合五金 Waste Mixed Metal Scraps	廠商經處理後回收貴重金屬及其他金屬 Vendor processes the scraps, and recycles the metal
日光燈 Fluorescent Lights	廠商處理後回收金屬、非金屬及玻璃等 Vendor processes the lights, then recycles any metal, nonmetal, glass, etc.
廢汞燈 Waste Mercury	廠商以汞蒸餾設備進行處理，將汞蒸出再利用 Vendor uses distillation equipment to process and reuse the mercury
資源化廢棄物 Resources	廢紙、玻璃、廢鐵鋁、廢保麗龍、鋁箔包、寶特瓶與廢塑膠等均交由回收廠商再利用 Waste paper, glass, aluminum scraps, styrofoam scraps, aluminum foil bags, plastic bottles, plastic waste, etc. are reused by recycling vendors



8.2.3 廢棄物管理

新唐科技廢棄物管理策略是源頭減量、減少掩埋及廢棄物資源化。我們採取精簡製程減少化學品使用、延長化學品與零配件更換時間等源頭改善方式降低廢棄物產生量，透過廢棄物分類收集的方式將可回收的廢棄物獨立收集，減少摻混以提高回收可行性。努力推動廢棄物源頭減量下，2013 年相對於 2009 年單位產品廢棄物產生量降低達 8%。近年因為目前已再利用廢棄物減量績效高，加上廠內原由水泥業回收之氟化鈣污泥，因該產業產能及運轉策略考量下已不與我們合作，而其他再利用途又不足以信任，因此改用掩埋方式處理，導致我們廢棄物再利用率下降且掩埋的比率上升。

8.2.3 Waste Management

Nuvoton's waste management strategy consists of three approaches: source reduction, landfill reduction, and waste recycling.

We have adopted a streamlined process to reduce the use of chemicals, extend the time between the replacement of chemicals and parts, and other methods to reduce the amount of waste generated. Through classification, recyclable waste can be individually sorted and collected, reducing mixing and improving the feasibility of recycling. Through our efforts to reduce sources of waste, the amount of waste generated per unit of product in 2013 has been reduced by 8%, relative to 2009. In recent years, the reduction performance of reuse waste has been high. Furthermore, the foundry had originally been recycling calcium fluoride sludge through the cement industry. However, due to considerations regarding production capacity and operating strategies, that industry is no longer working with us, and we do not trust other reuse purposes. So, instead, we have resorted to using burying methods, leading to a reduction in our waste recycling rate, and an increase in the proportion of burying.

8.3 氣候變遷

由於地表溫度的上升，近年來氣候變遷越演越烈，暖化趨勢和極端氣溫事件已在大多數地區出現，包括暖日增加、冷日減少，平均溫度上升、以及降水量變化度提高等。科學家預測，未來許多地區恐將面臨缺水危機、糧食產量下滑等問題。而大部分所觀測到的全球溫度上升因素，非常有可能來自於人為排放溫室氣體濃度的增加。而這些增加的溫室氣體累積於地球大氣層中，不斷地吸收太陽照射地球的能量而具有保溫作用，形成地球的「溫室效應」，使得全球溫度逐漸升高，並進而造成氣候變遷現象。因此減少溫室效應氣體的排放，成為企業永續發展的重要課題。

新唐科技對於降低溫室氣體排放的策略：進行溫室氣體盤查了解主要排放來源，推動減量降低排放量。

8.3 Climate Change

Due to the rise in surface temperatures and drastic climate changes in recent years, global warming trends and extreme weather events have been affecting most regions. The effects have included an increased proportion of warm days relative to cold ones, rises in average temperatures, an increased degree of changes in precipitation, and so on. Scientists predict that the future will probably bring an increased amount of water shortages, a decline in food production, and other issues throughout many parts of the world. The main factor to this rise in global temperatures is very likely due to the increase in anthropogenic greenhouse gas concentrations. The accumulation of greenhouse gases in the atmosphere continuously absorbs and insulates energy from the Earth's exposure to the sun. This "greenhouse effect" gradually causes an increase in global temperatures, resulting in the phenomenon of climate change. Therefore, reducing greenhouse gas emissions has become an important issue for the sustainable development of businesses.

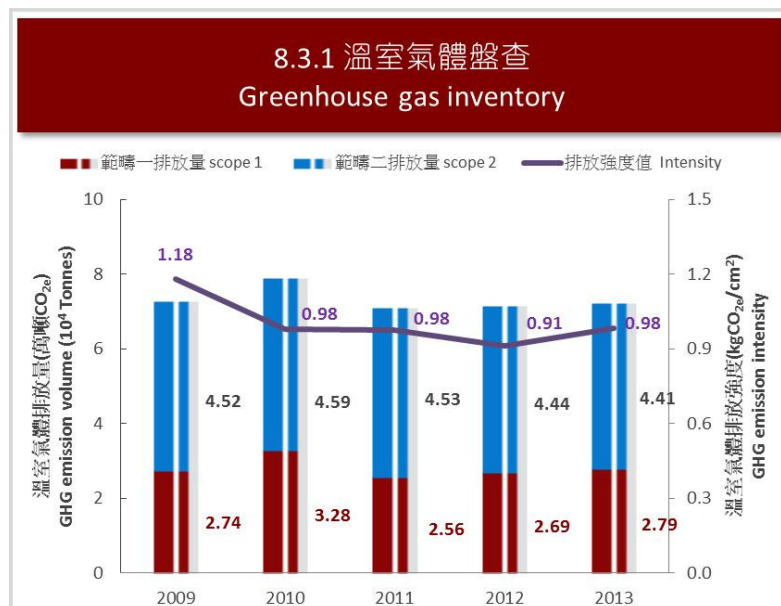
Nuvoton's strategy to reduce greenhouse gas emissions: Examine and understand the main sources of greenhouse gas emissions, and promote the reduction of emissions.

8.3.1 溫室氣體盤查

新唐科技從 2009 年起進行溫室氣體盤查，並訂定該年為溫室氣體排放基準年，盤查內容涵蓋範疇 1：直接溫室氣體排放及範疇 2：間接能源溫室氣體排放，但不包含範疇 3：間接溫室氣體排放，自 2009 年起溫室氣體盤查資料均通過第三者驗證機構依據 ISO14064-1 標準之查驗。 **G4-EN15, G4-EN16, G4-EN17**

8.3.1 Greenhouse Gas Inventory

Since 2009, Nuvoton has been conducting an inventory of greenhouse gases, while using the data from that year as a baseline for measuring emissions. The content of the examination includes: Scope 1 - Direct greenhouse gas emissions; Scope 2 - Indirect greenhouse gas emissions from energy use, which does not include Scope 3 - Indirect greenhouse gas emissions. Since 2009, the data from Nuvoton's greenhouse gas inventories have always passed inspections by third-party verification agencies based on ISO14064-1 standards. **G4-EN15, G4-EN16, G4-EN17**



註：依據行政院環境保護署溫室氣體盤查及登錄管理原則所定義之排放範疇：指依溫室氣體排放來源劃分之三大類溫室氣體排放範疇，範疇 1 係指來自於製程或設施之直接排放；範疇 2 係指來自於外購電力、熱或蒸汽之能源利用間接排放；範疇 3 係指非屬自有或可支配控制之排放源所產生之排放，如因租賃、委外業務、員工通勤等造成之其他間接排放。

Note: According to the GHG inventory and registration management guidelines of the Environmental Protection Administration, emission scope refers to the three main types of GHG emissions. Scope 1 consists of direct emissions from production process or facilities; Scope 2 refers to indirect energy-related emissions such as externally purchased electricity, heat or steam; Scope 3 refers to emissions from emission sources not owned or controlled by the company such as leasing, outsourced activities or employee commute.

8.3.2 溫室氣體盤查結果

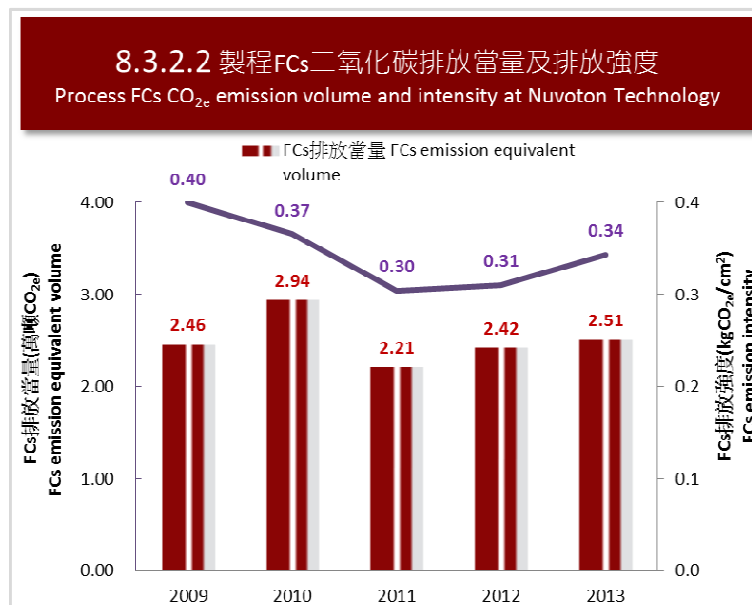
8.3.2.1 溫室氣體減量

盤查結果顯示主要排放為電力使用，其次為生產製造過程中於製程上使用的 FCs 含氟溫室氣體，如四氟化碳(CF₄)、六氟乙烷(C₂F₆)、六氟化硫(SF₆)、三氟甲烷(CHF₃)、全氟丙烷(C₃F₈)、八氟環丁烷(C₄F₈)等，此兩項占比超過總排放量之 90% 以上，因此溫室氣體減量措施也以此兩項為主。電力減量措施在 8.2.1 已有說明，製程用 FCs 減量措施部分，在 2009 年以前是以氣體取代為主，我們使用溫室氣體排放潛勢(GWP)較低的 C₃F₈ 取代在薄膜製程所用的 CF₄ 及 C₂F₆ 及取代在晶背蝕刻上所使用的 SF₆，降低 FCs 二氧化碳排放當量超過 50%，2009 年則透過調整製程參數及更換反應腔的方式進行減量。

8.3.2 Greenhouse Gas Inventory Results

8.3.2.1 Greenhouse Gas Reduction

The results of the inventory reveal that the majority of emissions are generated from electrical consumption, followed by the FCs fluorinated greenhouse gases used in the manufacturing process, such as tetrafluoromethane (CF₄), hexafluoroethane (C₂F₆), sulfur hexafluoride (SF₆), fluoroform (CHF₃), octafluoropropane (C₃F₈), and octafluorocyclobutane (C₄F₈). These two items account for more than 90% of our total emissions. Thus, greenhouse gas reduction measures are mainly focused on these two items. Electricity reduction measures are described in section 8.2.1 above. To reduce the FCs used in manufacturing, we mainly utilized gas replacements before 2009. For example, we used the greenhouse gas, C₃F₈, which has a lower Global Warming Potential (GWP), to replace CF₄ and C₂F₆ used in thin film processing, and SF₆ which is used in wafer backside etchings. As a result, FCs carbon dioxide equivalency has been reduced by more than 50%. In 2009, emissions were reduced by adjusting the process parameters and replacing reaction chambers.



8.3.3 產品碳足跡

新唐科技於 2010 年完成一片六吋積體電路晶圓「產品碳足跡」及「產品第三類環境宣告(Environmental Production Declaration, EPD)」盤查，依據產品生命週期評估(LCA)方法估算主要原材料自提取、製造及生產所造成之溫室氣體排放量，盤查範圍分範疇 1、範疇 2 及範疇 3 之其他間接溫室氣體排放量(含供應鏈、員工商務差旅、廢棄物委外處理及配送等)，同年並通過第三者驗證機構之查驗，符合「PAS2050」與「ISO 14067CD」國際碳足跡標準。足以滿足客戶在碳足跡揭露上的需求，並以此為基礎，協助客戶產出友善環境之綠色產品，強化永續發展之競爭力。

8.3.3 Product Carbon Footprint

Nuvoton completed the "Product Carbon Footprint" and "Environmental Production Declaration (EPD)" for the six-inch wafer in 2010 for examination purposes. According to the product's "Life Cycle Assessment (LCA)" method for estimating the amount of greenhouse gas emissions caused by the extraction, manufacturing, and production of the main raw materials, the examination has been divided into scopes 1, 2, and 3, and other indirect greenhouse gas emissions (including from supply chains, employee business travels, waste processing, distribution outsourcing, etc.). In the same year, Nuvoton has undergone inspections by third-party verification agencies that comply with "PAS2050" and "ISO 14067CD" international standards regarding carbon footprints. Our approach has sufficiently met our customers' demands to reveal information about our carbon footprint. Furthermore, we have been using our findings and measures as a basis to help customers produce environmentally friendly green products, which ultimately strengthens the competitiveness of sustainable development.

8.4 綠色產品

新唐科技透過建立產品有害物質管理系統 QC 080000，持續確保我們所設計、製造及銷售的產品符合或優於國際產品環境法規，並且要求上游原物料供應商及下游封裝測試業共同合作，以降低其產品對環境的各種衝擊，其中符合國際產品環境法規包括：

- 歐盟有害物質限用指令(RoHS 2.0, 2011/65/EU)：限制產品中鉛(<1,000ppm)、鎘(<100ppm)、汞(<1,000ppm)、六價鉻(<1,000ppm)、多溴聯苯(<1,000ppm)、多溴二苯醚(<1,000ppm)等濃度。
- 電子產品無鹵素要求：一般而言，客戶對無鹵素要求為產品中溴與氯之各別含量<900ppm、總含量<1,500ppm，新唐科技的產品均可符合前述要求。
- 歐盟化學物質登錄與管制法令(EU REACH)：針對歐盟 REACH 所公布的危險性物質及陸續公告之高關注物質(Substance of Very High Concern, SVHC)，新唐科技的產品均可符合此法規要求。
- 全氟辛烷磺酸(PFOS)限制標準：新唐科技在製程中禁止使用含 PFOS 之原物料。

除了現今的國際法令與客戶要求外，新唐科技亦持續關注未來可能新增的法規要求，做好因應準備。 **G4-PR9**

8.4 Green Products

By establishing the hazardous substances management system, QC 080000, Nuvoton continues to ensure that the products it designs, manufactures, and sells are able to meet or exceed the standards of international environmental regulations. Furthermore, Nuvoton requires upstream raw material suppliers and downstream packaging and testing firms to work together to reduce their various impacts on the environment and comply with the following international environmental regulations:

- The European Union's (EU) Restriction of Hazardous Substances Directive (RoHS 2.0, 2011/65/EU): Limits the amount of lead (<1,000ppm), cadmium (<100ppm), mercury (<1,000ppm), hexavalent chromium (<1,000ppm), polybrominated biphenyls (<1,000ppm), and polybrominated diphenyl ethers (<1,000ppm) in products.
- Halogen-free requirements for electronic products: In general, a halogen-free product by customer definitions means that the volumes of bromine and chlorine are each <900ppm, respectively, with total content <1,500ppm. All the products of Nuvoton comply with both requirements.
- EU's Registration, Evaluation, Authorization and Restriction of Chemicals (EU REACH): Regarding the hazardous substances and subsequent Substance of Very High Concern (SVHC) announced by EU Reach, all products of Nuvoton comply with the requirements of this regulation.
- Limits for perfluorooctane sulfonate (PROS): Nuvoton prohibits the use of raw materials which contain PFOS in the manufacturing process.

In addition to current international laws and customer requirements, Nuvoton will also continue to focus on potential regulatory requirements for the future, and proceed with all appropriate preparations. **G4-PR9**

全球永續性報告指標GRI(Global Reporting Initiative)G4 對照表 GRI G3.1 Index G4-32

本報告是根據全球永續性報告組織(GRI) G4指引的「核心要求」編制。「一般標準披露」及重要的「特定標準披露」詳見於下表，表內提供與報告有關的章節連結。
This report was prepared in accordance with the Core requirements of Global Reporting Initiative (GRI) G4 Guidelines. The General Standard Disclosures and Material Specific Standard Disclosures are presented below with respective linkage to the reported section(s).

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G4-11	受集體協商協議保障的員工百分比 Percentage of employees covered by collective bargaining agreements	最佳職場 Best Workplace	P32	-
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G4-13	報告期間內組織規模、架構、擁有權或供應鏈方面的重大改變 Significant changes during the reporting period regarding size, structure, ownership or organization's supply chain	本公司於報告期間無重大變化 No significant changes between 2012 and 2013.	-	-
G4-14	組織是否具備因應相關之預警方針或原則 Explanation of whether and how the precautionary approach or principle is addressed by the organization	公司治理 Corporate Governance	P22-P25	-
G4-15	組織對外界發起的經濟、環境及社會約章、原則或其他倡議的參與或支持 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	環境保護 Environmental Protection	P11,P20,P27	-
G4-16	國內外組織協會之會員身份 Memberships in associations and/or national/international advocacy Organizations	公司概況 About Nuvoton	P20	-

一般標準披露		互相參照/註釋	頁碼	外部保證
General Standard Disclosures		Cross-reference/Comments	Pages	External Assurance
鑑別重大考量面與邊界 Identified Material Aspects and Boundary				
G4-17	合併年報中的相關組織 Entities included in the organization's consolidated financial statements or equivalent documents	關於報告書 Overview	P5	-
G4-18	界定報告內容的過程及邊界 Process for defining report content and the aspect boundaries	關於報告書 Overview	P7,P8	-
G4-19	列出所有在鑑別過程中的重大考量面 Material aspects identified in the process for defining report content	關於報告書 Overview	P8	-
G4-20	組織內各重要考量面的邊界 Aspect boundary within the organization for each material aspect	關於報告書 Overview	P8	-
G4-21	組織外各重要考量面的邊界 Aspect boundary outside the organization for each material aspect	關於報告書 Overview	P8	-
G4-22	說明對先前報告書中所提供知任何資訊進行重編的影響及原因 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	我們首次發行企業社會責任報告。 This is our first report.	-	-
G4-23	報告的範圍及邊界與以往報告的重大分別 Significant changes from previous reporting periods in the scope and boundary	我們首次發行企業社會責任報告。 This is our first report.	-	-

一般標準披露 General Standard Disclosures		互相參照/註釋 Cross-reference/Comments	頁碼 Pages	外部保證 External Assurance
利害關係人參與 Stakeholder Engagement				
G4-24	利害關係群體清單 List of stakeholder groups engaged by the organization	關於報告書 Overview	P9,P10	-
G4-25	利害關係人之鑑別 Basis for identification and selection of stakeholders with whom to engage	關於報告書 Overview	P8	-
G4-26	利害關係人之參與方式 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	關於報告書 Overview	P9,P10	-
G4-27	利害關係人關心之議題，組織如何回應；提出該議題的利害關係人類別 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	關於報告書 Overview	P9,P10	-
報告概況 Report Profile				
G4-28	報告期間 Reporting period	關於報告書 Overview	P5	-
G4-29	上一份報告日期 Reporting period	我們首次發行企業社會責任報告。 This is our first report.	P5	-
G4-30	報告週期 Reporting cycle	關於報告書 Overview	P5	-

一般標準披露 General Standard Disclosures		互相參照/註釋 Cross-reference/Comments	頁碼 Pages	外部保證 External Assurance
G4-31	聯絡資訊 Contact point for questions regarding the report or its contents	關於報告書 Overview	P6	-
G4-32	GRI揭露指標、遵循依據以及外部聲明書 In accordance' option, the GRI content index and external assurance	關於報告書 Overview	P5	-
G4-33	為報告尋求外部認證的政策及現行措施 Policy and current practice with regard to seeking external assurance for the report	未經外部認證 Not assured	-	-
公司治理 Governance				
G4-34	公司治理架構，含最高治理單位的委員會，鑑別那些委員會負責經濟、環境和社會問題 Report the governance structure of the organization, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts.	公司治理 Corporate Governance	P22	-
道德與誠信 Ethics and Integrity				
G4-56	組織的價值觀、原則、標準和行為規範 Organization's values, principles, standards and norms of behavior	公司治理 Corporate Governance	P27	-

特殊標準揭露
Specific Standard Disclosures

類別 Category	重要範疇 Material Aspects	管理方針及指標 DMA and Indicators	互相參照/註釋 Cross-reference / Comments	頁碼 Pages	外部保證 External Assurance
經濟 Economic		管理方針 DMA	公司治理 Corporate Governance	P27-P31	-
	經濟表現 Economic Performance	G4-EC1 直接經濟價值之產生與分配，包括營收、營業成本、員工待遇、捐贈、其他社區投資、保留盈餘和借貸還款 Direct economic value generated and distributed	公司概況 About Nuvoton	P21,P35	-
	市場形象 Market Presence	G4-EC6 當地雇用程序及於重要營業據點自當地社區聘用資深主管的比例 Proportion of senior management hired from local community at significant location of operation	最佳職場 Best Workplace	P32	-
環境 Environment		管理方針 DMA	環境保護 Environmental Protection	P57	-
	廢氣排放 Emissions	G4-EN15 直接溫室氣體排放量(範疇一) Direct greenhouse gas emissions (scope 1)	環境保護 Environmental Protection	P68	-
		G4-EN16 間接溫室氣體排放量(範疇二) Energy indirect greenhouse gas emissions (scope 2)	環境保護 Environmental Protection	P68	-
		G4-EN17 其他間接溫室氣體排放量(範疇三) Other indirect greenhouse gas emissions (scope 3)	環境保護 Environmental Protection	P68	-

類別 Category	重要範疇 Material Aspects	管理方針及指標 DMA and Indicators	互相參照/註釋 Cross-reference / Comments	頁碼 Pages	外部保證 External Assurance
	廢污水和廢棄物 Effluents and Waste	G4-EN22 按水質及排放目的地分類的污水排放總量 Total water discharge	環境保護 Environmental Protection	P62	-
		G4-EN23 按類別和處理方法分類的廢棄物總量 Total weight of waste by type and disposal method	環境保護 Environmental Protection	P65-P66	-
		G4-EN24 嚴重洩露的總次數和總量 Significant spills	報告期間未發生 No Significant spills between 2012 and 2013.	-	-
	法規遵循 Compliance	G4-EN29 違反環境法令被處罰巨額罰款的總額，以及所受金錢 以外的制裁的次數 Fines and sanctions for non-compliance with environmental regulations	報告期間未發生 No Significant spills between 2012 and 2013.	-	-
	整體環境情況(環境投資) Overall (Environmental Performance)	G4-EN31 按類別說明總環保支出及投資 Total environmental protection expenditures and investments by type	環境保護 Environmental Protection	P58	-
社會面 - 勞動條件 Social - Labor Conditions	僱用關係 Employment	G4-LA1 按年齡組別性別和地區劃分的新進員工和離職員工 組數及比例 Total number and rates of new employee hires and employee turnover by age group, gender and region	最佳職場 Best Workplace	P34	-

類別 Category	重要範疇 Material Aspects	管理方針及指標 DMA and Indicators	互相參照/註釋 Cross-reference Comments	頁碼 Pages	外部保證 External Assurance
		G4-LA3 依性別畫分，於產假/ 育嬰假後之恢復工作率與留任 Return to work and retention rates after parental leave, by gender	最佳職場 Best Workplace	P35	-
	勞資關係 Labor/Management Relations	G4-LA4 重大營運變化的最短通知期 Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	本公司重大作業變更通知期皆依當地法令辦理 At Nuvoton, the notice periods regarding operational changes follow the local regulations.	-	-
	職業健康與安全 Occupational Health and Safety	G4-LA5 職業健康與安全委員會中，員工代表所佔比例 Percentage of workforce represented in formal joint management worker health and safety committees	最佳職場 Best Workplace	P42	-
		G4-LA6 依地區和性別畫分之工傷類別，工傷、職業病、誤工及缺勤比例，及因公死亡人數 Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	最佳職場 Best Workplace	P44	-
社會面 - 人權 Social - Human Rights	強迫與強制勞動 Forced or Compulsory Labor	G4-HR6 鑑別是否有強迫勞動的風險，消除風險的作法 Measures taken to eliminate forced or compulsory labor in risk areas	最佳職場 Best Workplace	P40	-

類別 Category	重要範疇 Material Aspects	管理方針及指標 DMA and Indicators	互相參照/註釋 Cross-reference / Comments	頁碼 Pages	外部保證 External Assurance
社會面 - 社會 Social - Society	法規遵循 Compliance	G4-SO8 因違反法律與規章所處重大罰款的金額，及非金錢性的制裁次數 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	報告期間未發生 No sanctions between 2012 and 2013.	-	-
社會面 - 產品責任 Social - Product Responsibility	顧客健康與安全 Customer Health and Safety	G4-PR2 依結果分類，違反有關產品和服務在其生命週期內之健康與安全性衝擊的法規與自願性準則的事件總數 Compliance with regulations and voluntary codes concerning the health and safety impacts of products	本公司之研發與製造，均遵守相關法律規定，未有因違反規定而受罰之情事。 No related incidents between 2012 and 2013.	P49	-
	產品與服務標示 Product and Service Labeling	G4-PR5 客戶滿意度調查結果 Results of surveys measuring customer satisfaction	客戶服務與供應商管理 Customer Service and Supplier Management	P49	-
	顧客隱私 Customer Privacy	G4-PR8 經證實與侵犯顧客隱私權與遺失顧客資料有關的投訴次數 Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	客戶服務與供應商管理 Customer Service and Supplier Management	P49	-
	法規遵循 Compliance	G4-PR9 因產品與服務的提供與使用而違反法律和規定被處鉅額罰款的金額 Compliance with regulations concerning the provision and use of products and services	報告期間未發生 No sanctions between 2012 and 2013.	P49	-

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