

The Role of International Standards in Promoting "Green Buildings"

際標準在推廣綠色建築的角色

Green Architecture in Macau 澳門的綠色建築

Carbon Management System Certification Scheme 「碳」管理體系認證計劃



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"VISION" encourages article submissions. Submitted articles should include both printed and soft copy in World or Rich Text format. Contributions should reach the Chief Editor by fax: (852) 2202 9222 and e-mail: vision@hkqaa.org.

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#### From the Editor 編者的話

We are living in a different world that people should realize how human activities affect global warming. Technological advancements over the last 40 years have been bringing product costs down and making everything more convenient, improving our lives. But this progress may come at the cost of something precious to us - our future. It is not too late to take positive steps to save the future by changing the way we do business, the way we live and the way we make our choices.

In this issue, we continue with our mission of advocating sustainable development by having renowned business executives and professionals shed light on this important subject. In this issue, we feature Dr Jorge Cajazeira, Pisano Bi and Ir Ronald Chin. In the Technical Corner, Dr Nigel Croft and Dr Francisco Vizeu Pinheiro discuss green building from the perspectives of standards development and architectural design respectively. An article on HKQAA's new certification scheme, "Carbon Management System Certification", provides information about reducing carbon emissions under HKQAA Updates.

The editorial team believes VISION needs to evolve to the next level this year. We are therefore preparing ourselves to reduce carbon emissions by using e-publishing to replace printing and mailing of hard copies. By doing this, we sincerely hope we can contribute to our future!

雖然我們生活於不同的國度,而人類的活動,正令到地球不斷暖化。過去四十年,技術的不斷進步,已令生產成本下降及為大眾帶來方便。毫無疑問這個情況會持續改善我們的生活。然而,這些優勢會帶來不同副產品,將會令我們付出最寶貴的代價—我們的未來。但我們可以重新制定我們的營商之道、生活方式、選擇方式,以將之改變。

今期,我們延續香港品質保證局的宗旨以提倡持續發展,多位知名的商界代表及專家如Dr Jorge Cajazeira、畢緣化先生以及陳正華工程師就上述重要議題作出講解。在技術研討一欄,倪國夫博士及樊飛豪博士透過規範發展及建築設計的未來發展為大家詳述綠色建築。本局快訊更詳述本局最新推出之「碳」管理體系認證計劃,對減少二氧化碳排放提供資訊。

本編輯委員會相信《管略》今年將演化至另一階段,我們為響應減少二氧化碳的排放,本刊將會以電子版形式發行以取代現有郵寄印刷版,從而為未來作出一些貢獻。

#### Mission 宗旨

To promote management systems and product certification concepts in accordance with the applicable certification standards; to assist industry and commerce to implement relevant systems; and to deliver world-class assessment and certification services.

以推動管理體系和產品認證概念為己任;協助工商界實施有關體系;提供國際級評 審及認證服務。

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# Sustainable Development -Giving Hope to Future Generations (II) 持續發展 一 給未來締造希望

Recalling from the most common definition defined by Brundtland Report released in 1987, sustainable development is to "meet the needs of the present without compromising the ability of future generation to meet their own needs." It implies that human practice should not diminish the prospects for future generations to enjoy at least an equivalent quality of life to what we are enjoying today. As more people are aware of the impacts of current practices on future generations, the interest on working towards sustainability has increased dramatically. The topic on sustainable development has become a worldwide issue and is expected to be put on the discussion table during the G8 summit held in July this year.

In the last issue of Vision, we shared some thoughts about the implication of sustainable development business and our future generation. This time, reputable professionals from various sectors share their understanding and view points from different angles about sustainable development. We hope companies interested in pursuing a sustainable future will get some useful information from reading these articles and will equip themselves to prepare for the challenges and opportunities in the years ahead.

回顧在一九八七年發表的布倫特蘭報告(Brundtland Report),「可持續發展」的標準定義是「既能滿足現今 的需求,又不危及下一代人滿足其需求能力之發展」。這 意味著我們不應剝削後代享有我們現有的同等生活質素。 隨著更多人了解現時的活動對下一代帶來的影響,努力實 現可持續發展的意慾也大大提升了。「可持續發展」已成 為全球的問題,預計這將列入今年七月舉行的G8峰會期 間討論的議題。

在上期的《管略》,我們分享了可持續發展對未來下一代 之影響。承接上期的主題,我們在今期邀請了不同行業的 專業人士,從不同角度分享對可持續發展的看法和觀點。 我們希望鋭意追求可持續發展的公司,能在今期刊載的文 章中獲得有用的資料,為未來的挑戰和機遇作好準備。

#### Insights from World Class ISO 26000 Expert ISO 26000國際知名專家之深

#### What is the role of social responsibility in sustainability?

Social Responsibility is defined in ISO 26000 as - among other things - the responsibility of an organization for the impacts of its decisions and activities on society and the environment through transparent and ethical behaviour that contributes to sustainable development. As well known, sustainability is the situation aimed by sustainable development. So, there is a direct connection between sustainability and Social Responsibility, that can be seen as means by which organizations can contribute towards a more sustainable World.

Another way to see this same subject by considering how important to sustainability are the activities of organizations in general (not only corporations, but any kind of organization, like public agencies, labour unions, NGOs and others). The greatest impacts on the environment - like waste generation, energy consumption, deforestation, pollution and others - are connected to the activities and decisions of organizations. And the same happens relating to social aspects, like the conditions of work, the wealth generation and distribution, and the respect for consumers and human rights. Most of the solutions and positive impacts in such aspects, will also rely on the actions of organizations. By being socially responsible, an organization will maximize its positive impacts and minimize the negative ones, thus contributing to sustainability.

#### How can ISO 26000 guide the users to develop sustainable management systems?

ISO 26000 is not a management system standard, but it brings to its users the key aspects to deal with Social Responsibility, thus building management systems that will contribute to sustainability. In this international guidance users will find not only a full set of key terms and definitions, but also an objective background to the context and principles of Social Responsibility. There are also detailed descriptions of the most fundamental



Dr Jorge Cajazeria Chairman of ISO Working Group for ISO 26000, ISO

ISO 26000 工作小組主席 Jorge Cajazeria 博士

#### 社會責任在可持續性中扮演了怎樣角色?

社會責任在國際標準ISO 26000是指一個機構的決策和活 動對社會和環境造成的影響,通過道德行為和透明化地為 可持續發展作出貢獻。眾所周知,持續性的目的是令企業 達致可持續發展。因此,可持續性和社會責任是有直接的 關係,即是說機構有助於建設一個可持續的世界。

從另一方面看,就是要考慮機構的活動對可持續性的重要 度(不僅是企業,如公共機構、工會、非政府機構等)。 對環境有著極大的影響,如廢物產生、能源消耗、砍伐 森林、污染等,均與機構的活動和決策相關。在社會方 面亦有同樣的情況,如工作條件、財富創造和分配,以 及對消費者和人權的尊重。解決此類問題的方法和能產 生的正面影響,都取決於機構的行為。要做到對社會負 責,機構應盡量發揮其正面影響而同時將其負面影響減 至最少,從而對可持續性作出貢獻。

#### ISO 26000 如何指引用戶建立 可持續管理體系?

ISO 26000 不是一個管理體系標準,但為社會責任提供重 要指引,發展成為對可持續發展作出貢獻的管理制度。 這套國際指引,不但為使用者提供一套完整的關鍵術語 和定義,還有社會責任的由來和原則的客觀背景。當中亦 詳細説明社會責任最基礎的模式(例如,持分者的參與、

practices for Social Responsibility (like stakeholder engagement, reporting and communication) as well as the Social Responsibility Core Subject and issues, with the basic actions and expectations related to them. Through ISO 26000 an organization will be able to understand the full range of aspects included in its Social Responsibility, and define strategies and processes to deal with them.

Today, when an organization starts to deal with Social Responsibility there are doubts about what should or not be included in its plans and concerns. The same happens when the organization's stakeholders are demanding its actions on certain problems or subjects. Once ISO 26000 is finished, all the people involved with an organization will have a common reference enabling them to set priorities and consensual plans to address the impacts and possible contributions of the organization and all its stakeholders and sustainability in general.

Because ISO 26000 is a very broad reference, aiming at organizations of all sizes and kinds, in the whole World, the users will not find a "ten easy steps" guide or a checklist. There will be guidance to be understood and considered while the organization develops its specific plans or management systems. This might sound surprising, but it is something that doesn't exist yet, even with sustainability being such a crucial and urgent challenge to humankind at the present time. And ISO 26000 will not forget the practical implementation aspects: it will include a very updated and comprehensive annex, bringing to the users a qualified list of tools and initiatives currently available for organizations to deal with specific topics of the integration of Social Responsibility in their ongoing regular business.

# What are the important enabling factors that help implement ISO 26000?

First of all, it's important to clarify that ISO 26000 is not meant to be "implemented", rather being "integrated" in the organization. Since "to implement" gives the idea of something one just "adds on" to an operation, something that starts and ends, once implemented. When talking about Social Responsibility, the idea is to bring a set of considerations and practices to the daily, ongoing activities of an organization. Social Responsibility is a way to operate, not a project nor a parallel activity to the "real business"

Having said this, there are many factors involved in an organization being socially responsible, and one can't make an exhaustive list. However, we should pay special attention to three aspects: the transparency, the engagement of stakeholders and the sphere of influence of the organization. Those aspects deserve special attention because without them any attempt to integrate Social Responsibility in the activities of an organization will be weak and more likely to fail or to be partial or discontinued. It is based on those practices that an organization will bring to its daily activities the commitment to really get in touch with its stakeholders, and to endure its activities throughout the time. Being Socially Responsible is not a project to start and end in a couple of years: it's a long term process, that will continuously improve, resulting in stronger and more flexible, resilient and lasting organizations.

A fourth aspect, also very relevant when bringing ISO 26000 to an organization, is the assessment of the issues included in the range of responsibility of the organization. This is essential to define a reasonable and meaningful set of subjects that the organization will deal with, and to prioritize them. Not doing this might result in a sense that there is an endless responsibility for every organization, with obvious negative aspects to motivation and realistic commitment of all involved.

Finally, we shall not forget that the commitment of the top decision makers will also be very fundamental to a successful integration of ISO 26000 in an organization. The involvement and participation of all levels is very important, and actually the whole process can start from the bottom or from the middle management. But for the deep and durable commitment, the top management commitment is essential.

報告和溝通)和社會責任的核心主題和問題,包括相關的行動及期望。通過ISO 26000,機構將能夠全面理解各方面的因素,包括該機構本身的社會責任,並確定處理這些問題的策略和過程。

現時,機構在處理社會責任時,都疑惑甚麼是應該或不計劃和關注。就像當持分者對某些困難或主題有要求機構作出行動時,同樣的懷疑也會發生。通過履行ISO 26000,所有員工將有一個參考標準,使他們能夠決定優先事項和經協商的計劃,來應對沖擊及顯出機構與持分者對可持續性的貢獻。

由於ISO 26000是一個涉及很廣的參考資料,適用於不同規模和類型的機構,用戶將無法找到「十個簡單步驟」的指南或清單。當機構發展具體的計劃或管理體系時,便須理解該指引及列入考慮範圍。令人感到驚訝的是,即使可持續發展是對人類非常重要,但周詳的計劃或管理體系卻尚未存在。ISO 26000不會忽略實際執行的需要,所以最新和全面的附錄會被包含其中,為使用者提供一個經審定的工具和提議清單,讓機構在日常運營上處理社會責任的議題。

#### 有什麼重要的誘因可幫助實施 ISO 26000?

首先,我們不是要「實施」ISO 26000,而是把它整合於機構內。因為「實施」給我們的想法是在運營上「附加」一些東西,一旦實施了便是有開始亦有完結。在談到社會責任時,是把一套周詳的考慮因素和做法帶到機構中。社會責任是一種運營的方法,它並不是一個項目,也不是一個「真正的業務」的平衡作業活動。

剛提到,一個有社會責任的機構,當中牽涉許多因素在內,在此很難臚列所有。然而,我們應特別注意三個方面:包括透明度、與持分者的承諾以及機構的影響範圍。如果沒有注意這些方面,任何企圖把社會責任整合到一個機構的活動也會變得薄弱,甚至失敗或只把部分或不連貫地整合在一起,所以這些都是值得注意的。機構以這些做法為基礎,在日常運作中,體驗到與持分者緊密聯繫的承諾,並與時並進。社會責任不是一個在數年內可以完成的項目,而是一個長時間的過程,不斷改進,從而孕育成一個更穩健、更有靈活性和歷久常新的機構。

第四個與ISO 26000 整合到機構中的相關方面就是評估機構在社會責任中的各種問題。機構必須先確定一些合理和有意義的題目,訂出優先次序。如果沒有這樣做,會令人覺得機構要履行沒完沒了的責任,並為投入的動力及承諾帶來負面影響。

最後,我們不應忘記管理層的承諾也是ISO 26000整合過程的成功基礎。企業上下共同合作和參與是非常重要的,實際上可以從低層或中層管理人員開始。但對於進一步和持久的承諾,高層管理人員的承擔是不可缺少的。



# ommentary of a Respectful Governmental Official on Sustainable Development

We have invited Ir Ronald Chin, Former Assistant Director (Building Services) of the Architectural Services Department (ArchSD), the Government of the HKSAR, talks about sustainable development in the construction industry.

VISION (V): Most people believe that sustainable development is critical to our future as residences of the earth as well as stakeholders of corporations. Without sustainable businesses, stability of society will be affected by unemployment rate, lack of resources, business malpractices and so on. Being one of the major industrial sectors in Hong Kong, construction industry plays a vital role in this issue. There is an old saying "Opportunities come with threats", riding the wave of green buildings and infrastructures, construction companies can grab the chance to build up their competitive edges through introduction of innovative and environmentally friendly technologies rather than struggle for survival by bidding contracts at low prices. Global community will be benefited through this win-win as greening of buildings and infrastructures will bring lower maintenance costs, higher operational efficiency and less impact to the environment. What are your thoughts of this?

Ronald (R): I agree that the concept of sustainability is not only beneficial to the construction business, but for the whole global community. As far as the construction companies are concerned, sustainability requires a resource commitment from the clients to improve the standard of built environment either for new construction or major retrofits of buildings. Construction companies should gear up their marketing strategies especially when global financial downturn would only make "return of investment" especially on energy costs savings projects to be economically feasible.

V: Energy conservation is one of the core elements of sustainable development, adoption of energy efficient measures to construction projects in an environmentally responsible manner will help reduce consumption of natural resources and emission of greenhouse gases. Several new energy efficiency requirements are incorporated in the series of newly published General Specification for building services installations in Government Buildings of the HKSAR, including solar hot water installation, heat pipe, total energy heat pump, automatic condenser tube cleaning system, fresh air pre-conditioner and etc. ArchSD always take new initiatives to build sustainable facilities for the public. A sustainable design needs not only to balance quality, environmental conservation, as well as health and safety performance, but also to achieve long term goals pertaining the well-beings of the society. Your thoughts...?

R: ArchSD is poised to promote the incorporation of sustainable design and construction which would be the driver for the construction industry to do better in both sustainable standards and workmanship.



Ir Ronald S Chin Former Assistant Director (Building Services), **Architectural Services Department** 前香港特區政府 建築署助理署長(屋宇裝備)-

我們邀請到前香港特別行政區政府建築署助理署長陳正 華工程師與《管略》讀者分享一下建造業對可持續發展

陳正華工程師

《管略》(管):大多數人認為,可持續發展對企業持份者 和大家的未來是攸關重要的。缺乏可持續發展,社會的 穩定性必會受到影響。失業情況、資源缺乏、商業舞弊 等社會問題之衍生出來。作為香港的主要工業,建造業 扮演著重要的角色。古語云:「危中有機」,隨著綠色 建築和基礎設施的趨勢,建築公司可以诱過引進創新和 環保的技術提升市場競爭力,而不是為掙扎求存以低價 格取得招標合約。國際社會將會受惠於這個雙贏的局面, 因為綠色的建築和基礎設施將帶來更低的維修成本,提 高營運效益和減少對環境的負面影響。有見及此,陳先 生有何看法呢?

陳正華工程師(陳):我認同可持續發展的理念不僅有利於 商業社會的建設,對全球整個社會亦可帶來裨益。就建 築公司而言,可持續性要求客戶的資源承諾,以改善建 築環境的標準,不管是新建造的或是翻新的建築物。建 築公司應加強市場上的營銷策略,特別是在全球金融不 景氣下只會獲得「投資回報」,尤其是在節約能源成本 的項目,在經濟原則上是可行的。

管:節約能源是可持續發展的核心元素之一。幾項新的 能源效益要求已刊載於一系列新出版的《香港特區政府 建築物內裝置的一般規格》內,這些設備包括太陽能熱 水裝置、熱管、總能源熱泵(TEHP)、冷凝器管自動清洗 系統、抽濕機和新鮮空氣預熱空調等等。建築署經常採 取新的措施,為市民建設可持續使用的設施。陳先生有 何意見?

**陳**:建築署已作好準備,提倡建造業融合可持續性的設 計,這將帶領建造業在可持續發展的標準和技術上做得



#### Sustainable Development Practices - Wal-Mart's Experience 沃爾瑪實踐可持續發展之經驗

Wal-Mart owns nearly 6,500 retail stores in 13 countries around the world. There are 115 retail stores in China, widely spread over 60 cities. Wal-Mart serves nearly four millions customers every week. As a major retail chain, how does Wal-Mart put into practice sustainable development and corporate social responsibility? Mr Pisano Bi, Asset Protection Director of Wal-Mart China, shared his insights on sustainability with us.

#### **Self Improvement and the Road Ahead**

Wal-Mart held a Sustainable Development Summit in October 2008 in Beijing. At the summit, the company publicized the fact that it will adopt a series of measures to build a more socially responsible and environmentally protected supply chain, including the establishment of the world's leading high-value sustainable development supply chain. And to ensure that Wal-Mart's shopping outlets are environmentally and socially responsible, sustainable energy and water use is being introduced.

Wal-Mart's next major task will be building a more environmentally friendly shopping center, to ensure that they are the leaders in sustainable development in China.

Wal-Mart will design and launch a new sample store, which will use 40% less energy and reduce energy consumption by 30% by 2010. In the next two years, Wal-Mart China will reduce its water consumption by half through the development of new hardware and systems. Best practices will be promoted to ensure that the shopping centers and staff use water resources as effectively as possible.



#### Supply Chain Leads to Sustainable Development

Wal-Mart is actively working with suppliers to establish a culture of sharing best practices and enhancing transparency, in order to better assist us in further fulfilling the mission of sustainable development. For example, Wal-Mart established a new qualification procedure for suppliers, signed new contracts with them, required their factories to comply with ethnical and environmental standards, accepted unannounced audits and released relevant information to the public. The new standard means having to comply with every law and regulation in China. The adoption of a sustainable business model will not only reduce costs; in the long run, suppliers who share our goal will have more opportunities to work with us in achieving business growth through continuous innovation, and promoting environmental protection.

#### **Care in Selecting Suppliers**

In order to further promote sustainable development, as well as ensure the standard of the suppliers in the supply chain, Wal-Mart has requested all suppliers to comply with local laws and act as role models in the matter of social and environmental standards. In addition, Wal-Mart continues to emphasize the importance of the quality and safety of products and has set down strict quality standards. For example, we only procure goods from suppliers recognized by the Government; we implement integrated quality assessment and third-party audits, and use independent testing laboratories to ensure suppliers meet specifications. Wal-Mart is also committed to working with suppliers on sustainable development, on such initiatives as "agriculture super-docking", the "green packaging" model, among others. In this way, partnerships will be developed and we will continue to innovate, save energy, improve efficiency, achieve sustainable development and "change the growth model" objectives. Cost savings will be passed on to customers so that the benefits trickle down through society.



Mr Pisano Bi Asset Protection Director, WAL-MART China

沃爾瑪(中國)投資有限公司 資產保護部總監畢緣化先生

在全球十三個國家中,沃爾瑪有近六千五百家門市。在中國擁有一百一十五家分店,遍佈六十個城市,每星期接待近四百萬人次。作為一家連鎖銷售企業,沃爾瑪如何體現持續發展及企業社會責任?所以我們特別與沃爾瑪(中國)投資有限公司資產保護部總監畢緣化先生與我們一同分享實踐可持續發展的經驗。

#### 自我完善 牽頭作用

在二零零八年十月沃爾瑪在北京舉行了可持續發展峰會,主要討論沃爾瑪為建立更環保和具有社會責任的供應鏈將採

取的一系列措施和步驟,包括建立世界領先的高價值可持續發展供應鏈,並確保沃爾瑪的商場更加可持續化,包括對能源和水的使用。

同時,沃爾瑪宣布了接下來的主要工作,是把商場建設得更加環保,使沃爾瑪中國成為中國可持續發展的領先者。到2010年,沃爾瑪將在中國設計並開設一家節能百分之四十的新型環保樣版店,並減少現有商場百分之三十的能源消耗。在未來兩年內,

沃爾瑪中國將通過開發新的硬件和系統,使其所有 商場的用水量減半,並推廣最佳實踐,幫助商場和員工更 有效地利用水資源。

#### 持續發展 從供應鏈做起

沃爾瑪正積極與供應商建立一種分享先進經驗的文化,讓彼此之間透明度更高,有助我們進一步履行可持續發展的使命。比如,沃爾瑪對供應商制定新的資格預審程序,與供應商簽訂新的合同,要求他們的工廠嚴格執行道德和環境標準,接受不定期的檢查,對公眾公布相關信息。這裡所提到的標準是指符合中國的各項法律法規的要求。從長遠來看,採用可持續發展的商業模式不僅將成本減少,那些和我們有共同目標的供應商,通過不斷創新及在其業務中推行環保實踐,將更有機會與我們實現共同的業務增長。

#### 慎選供應商 實現長遠績效

為了進一步推行持續發展,以及確保供應鏈內供應商的水平,沃爾瑪均要求所有供應商要遵守當地法律,同時在社會和環保標準方面作出良好示範。另外,沃爾瑪亦非常注重進場商品的質量和安全,並有嚴格的標準為之把關。例如,沃爾瑪只從獲得政府認可的供應商那裡採購商品,實施綜合質量考評,委託第三方審核或獨立實驗室檢測以確保供應商符合規格。沃爾瑪還致力於跟供應商一起在可持續發展上努力,比如通過「農超對接」、「環保包裝」等模式與供應商發展合作夥伴關係、不斷創新、節能降耗、提高效率,並和供應商共同實現可持續發展和「轉變增長方式」的目標,將更多節約下來的成本傳遞給顧客,為社會實現長遠效益的貢獻。

# **Surf Tide with Loyal Customers** 留住顧客 抵禦驚濤

Making customers loval is one of the goals that every company pursues. If a company can keep a group of loyal customers, it will enjoy a reliable source of income even in the middle of an economic depression. But if a company loses its customers at the same pace as economic shrinkage, severe consequences may be expected.

What factors contribute to customer loyalty? Whenever a customer makes a buying decision, she must bear 'consumption risk', that is, the risk of buying a product which turns out to be the wrong one, leading to regrets.

The first time a customer makes a purchase at a shop, provided there is no problem, she will be "loyal" and visit this shop again, because she is uncertain about the quality of other shops. If the quality of the shop deteriorates, this means that the consumption risk is realized, the customer is dissatisfied and will switch to other shops.

To compensate a customer for such risk exposure, a company will voluntarily offer a risk premium to the customer. The risk premium can take the invisible form of high quality service offered, or the visible form of gifts and product samples. A company may conduct mystery-shopping assessments on its outlets to ensure the delivery of high quality service by its employees.

When the volume of business and the number of loyal customers decline, a business leader must find out the root causes of the problem and explore possible remedial actions. One of the methods of spotting the clues is the customer satisfaction survey (CSS), in which customers give ratings on different product and service attributes. Low ratings may explain why customers are defecting.

The CSS is not limited to customers, and can be extended to employees (who might be called "internal customers"). You can imagine, if an employee is dissatisfied with the company or does not agree with the top management's decision, he will hardly give a warm welcome to customers. Therefore, a company should periodically conduct CSS on its employees, to know their feelings and level of support for the company.

Because of internationally recognized quality awards such as Malcolm Baldrige Quality Award and the Deming Quality Award, the theme of "customer satisfaction" is currently prominent. Awardees are of course praised by their customers for producing a very high level of satisfaction, but the most important thing is that the awardees incorporate the measurement of customer satisfaction into their quality management system (QMS), gathering information for planning continual improvement initiatives.

「要令你的顧客成為忠誠顧客! | 相信都是每家企業追 求的事情。企業若可留住一群忠實顧客,在經濟前景未 明朗時,能為企業提供穩定的收入,維持業務運作。若 然顧客流失的速度與經濟收縮相同,其對企業造成的嚴 重後果自是不言而喻。

作為企業領導人,在建立你的忠誠顧客群之前,可能先 要了解為何顧客會「忠誠」。顧客的每個消費決定,都 要承受「消費風險」,簡單來說,就是會否買錯產品, 心感後悔。

顧客第一次到某間店舖消費,倘若質量沒有問題,他通 常在短期內會再次光顧,原因是他擔心其他店舖的質量 較差,冒上「消費風險」。假如店舖的質量變差,令顧 客的「消費風險」成為事實,使顧客不滿,他們必定轉 投其他店舖的懷抱。

為了補償顧客的「消費風險」,企業會自願付上「消費 溢價」,無形的溢價包括尊貴的待客服務,有形的溢價 可以簡單如奉上贈品或產品的試用裝等。企業要確保前 線職員服侍顧客週到,都會用上神秘顧客定期「暗訪」 店子,評核職員的表現。

如業績出現倒退,忠誠顧客減少,企業領導人必須找出 根本原因,對症下藥醫治。探查方法之一,就是進行顧 客滿意度調查,要求顧客對各個產品及服務環節評分, 其中評分較低者,很大機會就是顧客流失的主因。

但顧客滿意度調查,對象不限於顧客,也覆蓋企業的職 員,即所謂「內部顧客」。試想想如果職員對企業不 滿,或者不認同管理層的決策,又怎能笑面迎接顧客, 為顧客提供稱心的服務。所以,企業應定期向職員進行 滿意度調查,了解他們對企業的感受及支持度。

放眼於今天為人所認識的國際質量獎項,例如Malcolm Baldrige質量獎、Deming質量獎等,都把顧客滿意度放 在評判標準之內。獲獎企業在其顧客心中的滿意度必然 高,但更重要的,是企業把顧客滿意度的量度融入其質量 管理體系(QMS)之內,為持續改善提供重要的參考數據。

> 今天,要令你的顧客成為忠誠顧 客,先從了解你的顧客開始。



To make your customers loyal, you need to begin by understanding them.











# The Role of International Standards in Promoting "Green Buildings" 國際標準在推廣綠色建築的角色

Author: Dr Nigel H. Croft

Associate Technical Director, HKQAA

With a world population that has more than doubled since 1950 and is steadily moving into urban areas, the building construction industry has grown into one of the largest global industry sectors, with profound consequences for all three dimensions of sustainable development - economic, social and environmental. From an environmental perspective, construction is both a major consumer of natural resources and a potential generator of large amounts of waste and pollution. In addition, buildings are significant users of energy, with related emissions of greenhouse gases. It is not surprising, therefore, that there is significant interest within the International Organization for Standardization (ISO) to produce standards that promote and support the concept of "Green Buildings". Indeed, the theme of ISO's World Standards Day message in October 2008 was "Intelligent and sustainable buildings".

All interested parties have a role to play in achieving this "green" objective - designers and architects, engineers, owners, property managers and government authorities, to name but a few. There are many international standards already published and more under development relating either directly or indirectly to the aim of achieving truly "Green buildings". In addition to the well-known ISO 14000 series of standards (which continue to be applicable to the construction sector), these include ISO standards for climate change mitigation, energy saving, environmental terminology, environmental performance, environmental declaration of building products, energy efficiency and greenhouse gas emission accounting and verification. There are also standards that indirectly contribute to the "green" phenomenon, such as those published by the International Electrotechnical Commission (IEC), which are used to help conserve energy in the built environment.

#### International Standards Relevant to "Green Building"

While no single ISO or IEC standard sets out all required criteria for green buildings, ISO's Technical Committee TC59 (Building Construction) has recently published a series of documents that are directly applicable:

- ISO 15392:2008 establishes general principles for sustainability in building
  construction. It is based on the concept of sustainable development as it applies
  to the life cycle of buildings and other construction works, from their inception to
  the end of life. ISO 15392:2008 is applicable to buildings and other construction
  works individually and collectively, as well as to the materials, products, services
  and processes related to the life cycle of buildings and other construction works.
- ISO 21930:2007 describes the principles and framework for environmental declarations of building products, taking into consideration the complete life cycle of a building. The overall goal of environmental declarations in this sector is to encourage the demand for, and supply of, building products that cause less stress on the environment through communication of verifiable and accurate information on environmental aspects of those building products that is not misleading, thereby stimulating the potential for market-driven, continual environmental improvement.

作者:倪國夫博士

香港品質保證局技術總監

自1950年以來,世界人口已增長了一倍以上,並逐步遷往市區居住,建築物建造業已經發展成為最大的全球性產業之一,對可持續發展的經濟、社會和環境三個方面都具有深遠的影響。從環境角度來看,建造業既消耗很多的天然資源,亦造成大量廢物和污染。此外,建築物在使用時耗用大量能源和排放溫室氣體。因此,國際標準化組織(ISO)也非常關注並提出促進和支持「綠色建築」概念的標準。在2008年10月的ISO國際標準日的主題正是「智能與可持續建築」。

設計師、建築師、工程師、業主、物業管理公司和政府機構等持份者都在實現「綠色環保」目標上扮演著重要的角色。現時已有許多直接或間接實現真正「綠色建築」相關的國際標準,一些標準也正在開發中。除了繼續適用於建築行業的ISO 14000標準系列外,還有針對紓緩氣候變化、節能、環保術語、環保績效、建築產品的環保聲明、提高能源效率和溫室氣體排放的計算和查核的ISO標準。此外,也有間接促進環保的標準在推行,如國際電工委員會(IEC)出版的標準,用以幫助在建築環境中節約能源。



#### 與「綠色建築」相關的國際標準

雖然沒有單一的ISO或IEC標準規定了所有綠色建築的必備條件,但是ISO/TC59技術委員會(建築物建造)最近出版了一系列直接適用於綠色建築之相關標準:

- ISO 15392:2008建立了使用建築物建造的可持續發展 之通用原則。該標準採用了可持續發展的概念,應用 於建築物和其他建築工程的整個生命週期。此標準可 應用於獨立的建築物和其他建設工程或綜合項目,以 至整個建築物和其他建築工程的生命週期內的材料、 產品、服務與流程。
- ISO 21930:2007闡釋了建築產品的環保聲明之原則和框架,同時考慮到建築物的生命週期。這個行業的環保聲明之整體目標是鼓勵對環境產生較少壓力的建築產品的需求和供應,通過傳達一些不誤導、可查核和準確的環境因素資料去刺激由市場推動持續的環境改善潛能。

- ISO/TS 21929-1:2006 provides a framework, makes recommendations, and gives guidelines for the development and selection of appropriate sustainability indicators for buildings. This Technical Specification includes a framework for assessing the economic, environmental and social impacts of buildings and provides some examples of possible indicators.
- ISO/TS 21931:2006 gives a general framework for improving the methods used to assess the environmental performance of buildings. It describes issues to be taken into account when conducting environmental performance assessment of new or existing building properties in the design, construction, operation, refurbishment and deconstruction stages.

ISO's Technical Committee TC 205 (Building Environment Design) has also developed standards on building automation control systems and numerous others specific to environmental design of buildings.

- ISO 16813:2006 aims to assess a proposed design with criteria ranging from indoor air quality, to thermal comfort, and also energy efficiency.
- ISO 16818:2008 specifies terms and definitions used in the design of energy-efficient buildings.
- ISO 23045:2008 provides guidelines to assess the energy efficiency of new buildings, and is applicable to space air-conditioning equipment and the heating plant being installed.

ISO's Technical Committee TC 162 (Doors and Windows) is developing standards to maximize the energy conservation of doors and windows, and yet another committee - Thermal Performance and Energy Use in the Built Environment (ISO/TC 163) - is responsible for developing standards on the thermal performance of not only the whole building, but also the materials, products, components, elements and systems contained within the building.

Finally, the IEC's Joint Technical Committee with ISO for information technology (ISO/IEC JTC 1) developed the ISO/IEC 14543 series of standards, which integrate information technology with a building's electronic system. With standards that cover management of an integrated system, wiring, frequency and control panels, these standards can help integrate the controls of a house or apartment's lighting; security system; heating, ventilation, and air conditioning systems; water control; and energy management, as well as household appliances.

#### Conclusions

The road to achieving the goal of "green buildings" is a complex one, involving collaboration and contributions from many different disciplines. In addition to the well-known ISO 14000 family of standards for generic environmental management, there are many other ISO and IEC standards that provide guidance on specific topics as they relate to the construction sector at all stages of the buildings' life-cycle.

- ISO/TS 21929-1:2006 為發展和選擇適當可供建築物使 用的可持續發展指標提供了一個框架、建議和指導。 這技術規範包括一個用於評估建築物對經濟、環境和 建築物對社會影響的評估,並提供一些可應用的指標 作例子。
- ISO/TS 21931:2006 為改進建築物的環境績效評估的 方法提供了一個框架。當中提及到進行全新或現有建 築物的設計、建設、運營、翻新和拆卸階段的環境績 效評估時必須考慮的因素。

ISO/TC 205技術委員會(建築物環保設計)也發展了建築物 自動化控制體系和許多其他針對建築環保設計的標準。

- ISO 16813:2006 旨在以室內空氣質素、舒適度和提高 能源效率方面的準則,評估設計方案之標準。
- ISO 16818:2008 詳細説明設計節能建築物使用的術語 和定義。
- ISO 23045:2008 為評估新建築物的能源效率提供指引, 並適用於空間冷氣設備和已安裝的制熱裝置。

ISO/TC162技術委員會(門和窗戶)正制定標準以擴大門和 窗户的能源節約,另外,ISO/TC163技術委員會(建造 環境內熱能績效及能源使用),則負責建築物及其中的材 料、產品、零件、組件和系統之熱能績效標準。

最後,IEC與ISO資訊科技而設的聯合技術委員會 (ISO/IEC JTC 1) 開發了資訊科技ISO/IEC 14543標準 系列,整合了資訊科技與建築物的電子系統。標準包括 整合體系管理、線路、頻率和控制板,這些標準可以幫 助整合一所房子或公寓的照明、安全系統、暖氣、通風 和冷氣系統、水質控制和能源管理,以及家用電器。

#### 總結

實現「綠色建築」的目標是一條很不簡單的道路,包括 多方面的合作和貢獻。除了眾所周知的ISO 14000標準系 列的基本環境管理,還有很多其他ISO和IEC標準,針對 建築行業在各個生命週期階段的相關要求提供指引。





Author: Dr Francisco Vizeu Pinheiro First Vice President. Macao Architects Association (AAM)

Most of modern Macau and Hong Kong was built after the Second World War, in a period of submission to prophets with a distinct vision of the future of architecture, like Corbusier and Sant'Elia. They anathematized vernacular traditions and styles and created an artificial antagonism between the past, history, tradition and the world of the future. "The Street is wrong" said Corbusier, and for Sant'Elia the old knowledge and techniques accumulated over centuries had to be scrapped: "the Futurist house must be like a gigantic machine" (The Futurist Manifesto). This is a simplified explanation of the philosophical background that contributed to the fast and unsustainable growth of the city as a machine, uncaring of damage to the natural environment or city heritage.

However, we can correct past mistakes and drink from a few springs of ancient wisdom remaining in the architectural heritage of Hong Kong and Macau. Before the time of air conditioning, both Western and Chinese buildings were located, oriented and designed so as to integrate with the natural landscape and benefit from natural ventilation and light. Knowledge of prevailing winds was combined with the use of permeable wooden screens, balconies and courtyards to facilitate horizontal and transverse natural ventilation, for example in de Mandarin house (Fig. 1). Old residents remember that Macau used to be a comfortable place to live in, even without air conditioning. The sea, river and hills help the flow of air, functioning like a gigantic natural air conditioner. However, in the 1980's, the economic boom led to the proliferation of poorly planned housing boxes and created the 'Great Wall of Macau' (Fig 2), blocking the natural ventilation from the river to the city, aggravating the urban heat islands effect and trapping pollution.

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許多澳門和香港的現代建築物都是在第二次世界大戰爭 後興建的,該時期有不少對將來的建築規劃具有獨特眼 光的建築大師如Corbusier和Sant'Elia的作品面世。他們 破舊立新,摒棄傳統的風格和作風,在昔日的傳統和未 來的設計方向之間抗衡。Corbusier曾説:「這是設計錯 誤的街道。」,而Sant'Elia則認為累積了多個世紀的知識 和技術是需要摒棄的,他說:「未來的房子必會像個巨 大的機器。」(未來主義的宣言)。這是一個簡單的哲學 解釋,促使城市不能持續地發展,就好像一台機器,對 自然環境的損害或城市文化遺產都漠不關心。

然而,我們可以糾正過去的錯誤和受惠於留存在香港和 澳門的建築遺產的古代智慧。在空氣調節出現以前,西 式和中國式的建築物以導向式的設計配合自然景觀,獲 得自然通風和自然光線,掌握主要風向及配合透風的木 製屏風、陽台和庭院的設計,有助自然通風,例如(圖1) 的中國式房子。澳門舊居民仍會記得,即使沒有空氣調 節的日子,澳門也是一個生活舒適的地方。海洋、河流 和山丘像一個巨大的天然調器,幫助空氣的流動。然而 ,在八十年代,經濟繁榮導致計劃不周的房屋像盒子般 散佈,形成了"澳門長城"(圖2),阻擋了由河流到城市 的天然通風,加劇了城市熱島效應和密封式的污染。

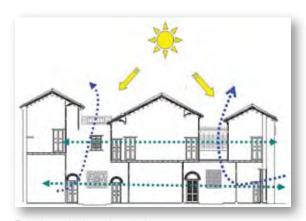


Fig 1 Natural light and ventilation 圖1 自然光線與通風



Fig 2 The great wall of Macau 圖2 澳門長城

To return to a more harmonious relationship with the natural environment and heritage, we need to learn lessons from the past and integrate them with up-to-date technology so as to address the new challenges in architecture. This was the approach used in the design for the first green university in Macau, the Macau Inter-University Institute, which combines ancient wisdom, local traditions and advanced technology. Solar panels, green roofs, cascading thermal ventilation and water recycling mingle with traditional systems that are used in a new way to form one single institutional space.

要回復自然環境和文化遺產的和諧關係,我們從過去中 學習再融入嶄新的技術,以面對新的建築挑戰。這個方 法應用於建設首間澳門綠色大學一澳門高等校際學院的 設計裡,結合了古代智慧、當地傳統和先進技術。太陽 能電池板、綠化屋頂設計、熱量通風層和水循環系統揉 合傳統的屋宇系統,形成此新學院的空間。

The new IIUM campus represents the first academic, and possibly the first ever, green building in Macau. Up-to-date technology and old regional vernacular traditions are use in a complementary and supportive way to make this compound an energy-efficient and eco-friendly facility.

澳門高等校際學院的新校園代表了澳門首間綠色建築的 學院。嶄新的技術和本地的傳統風格可互相補足、相輔相 成,讓這幢建築物更趨節能和環保。



Fig 3 Green campus-zoning 圖3綠色校園的區域劃分

The new campus (Fig. 3) will house an undergraduate student body of 1,200 and around 400 postgraduate students, and there will be a senior secondary school for up to 800 students on the same site. The design team was lead by Professor Koji Yagi from the Tokyo Institute of Technology. For several years, and in cooperation with several Macau academics and institutions, Yaqi has researched heritage architecture and urban planning. The new campus uses natural ventilation methods in urban patterns like courtyards, galleries, an atrium, open corridors and patios, which are traditional in Macau vernacular architecture. Courtyards and patios contribute to organizing the interior spaces, which intertwine in a network of galleries, atriums and corridors that resemble the organic urban texture of Macau. According to Professor Yagi, "The main concept of this planning is spatial dialogue, between exterior and interior spaces, the school and the university, teaching/study spaces and relaxation zones, student and faculty areas, and so on. Some innovative design features are:

Campus Plaza: An exterior open space embraced by a series of buildings creates a large central plaza for various activities. Trees on the ground provide shaded space for people and group gatherings. Smaller open spaces have been left between buildings and at corners for smaller groups or individuals. The upper parts of the basketball and squash courts stick out into the plaza and invite students to sports visually through glass

Platforms: Roofs over basketball courts, auditorium and library provide open spaces for various activities. Some parts are green and others parts wood decked.

Atrium: To establish a building that supports and encourages social activities with dynamic study and research environments, there are many open study areas around the atrium and a wireless network makes it possible to work anywhere in the building, bringing about rich possibilities for informal and spontaneous contact. Conceptually, the atrium creates a vibrant central heart in the building and provides a wide range of interior spaces for various types of communications. There is an open canteen, bookshop, staircase, glass elevator, balcony and bridges, so a rich and varied universe of visual and social connections across the atrium is attained three dimensionally.

Wide Corridors: The width of corridors facing the atrium is varied to enable group meetings at various spots

Possibility for Re-organization and Expansion: Having regular column spans of 5.5m by 12m, it is easy to house various types of room arrangements. That makes it easy to re-organize the rooms according to different requirements. The proposed school building of 2 levels underground and 4 levels above ground may be constructed in reinforced concrete keeping the possibility of an additional 2 levels in steel construction on top. It is also possible to add new towers at various locations, for instance the main approach area for cars or in front of the faculty residence.

新校園(圖3)將供1,200名大學生和約400名研究生使用,而且在同一校 新校園(圖3)府氏1,200百八字王中間中100百別九工及川 明年上日 於園將會有一所可容納逾800名學生的高中學校。設計組是由東京工業學院的Koji Yagi教授領導。幾年來,Yagi教授曾與幾所澳門的院校和機構合作 並在傳統建築和城市規劃方面作深入的研究。新校園在城市格局中善 用自然通風,如建造庭院、畫廊、中庭、開放式走廊和天井,這是澳門 本土的傳統建築。庭院和天井有助安排內部空間,連接畫廊、庭園和走 廊,使之與澳門的自然城市本質相似。按照Yagi教授所言,主要規劃的概念是在外部和內部、中學和大學間、教學/學習空間和休憩區,以及學 生和教師的佔用範圍等製造多層空間對話。部分創新的設計特點包括

**校園廣場:**外圍空地環繞了一系列的建築物,創造了一個供各種活動的 大型中央廣場。地面的樹木提供了個人和團體聚會的遮蔽空間。在建築 物和角落之間剩餘的小空間可供小型團體或個人使用。籃球場和壁球場 的上層部份延伸至廣場內,學生可通過玻璃窗看到體育場。

**平台:**籃球場、禮堂和圖書館三個地點之上蓋,提供開式放空間給各種 活動使用。由綠色建設再配合部分木材裝飾而成。

中庭:為支持和鼓勵動態學習和研究環境的社區活動,建立多個開放式的 閱讀區屬鎮中庭,覆蓋無線網絡,方便使用者在建築物的任何地方工作, 閱讀區屬鎮中庭,覆蓋無線網絡,方便使用者在建築物的任何地方工作, 提供無拘無束的交流園地。理論上,中庭創造了一個充滿活力的核心建設 偌大寬敞的內部空間可供各種型式的交流活動。開放式的食堂、書店、 樓梯、玻璃電梯、陽台和橋樑互相映襯,形成豐富的立體視覺效果。

實閱走廠:面向中庭的實閱走廊,方便使用者隨時隨地進行小組會議。

**重組和擴展的可能性**:固定的圓柱跨距是5.5米 X 12米,容易組成不同類 型的房間安排,也更容易按不同的要求重組房間。建議的學校建築規劃 為兩層地下室和四個樓層,可用鋼筋混凝土建造,提供加建兩個鋼結構 樓層的可能性。另外,更可以在不同地點如車輛主要進出的區域或教學 宿舍前增建新的大樓。

# Carbon Management System Certification Scheme 「碳」管理體系認證計劃

The HKQAA Carbon Management System (CarboMS™) Certification Scheme is a program that assists organization to take systematic and genuine actions against greenhouse gas (GHG) emission. The scheme is applicable to all industries and was developed based on ISO 14001 and ISO 14064 requirements. It encourages and rewards organizations to establish and implement a management system to identify, measure, reduce and offset total GHG emission due to business activities. Only the boundaries defined by the participating companies will be assessed during the certification process. The certification boundaries may cover any of the business functions, activities, products, projects or services.

香港品質保證局「碳」管理體系 (CarboMS™) 認證計劃是一個協助機構有系統地採取實際行動減少溫室氣體 (GHG)排放的項目。這項認證計劃是根據ISO 14001和ISO 14064的要求開發,適用於所有行業。主要目的是鼓勵及獎勵機構制定和實施管理體系的成果,當中包括商業活動中識別、量度、減少和補償GHG的總排放量。參與機構所選定的範圍將會在認證過程中受到評審。認證範圍可涵蓋機構的其中或所有商業功能、活動、產品、項目或服務。

#### **Carbon Management System Certification Process**

#### 「碳」管理體系的認證過程

#### Application for Certification 遞交認證申請表

Applicant will need to complete an application form and submit together with the following to HKQAA

- General company information
- Certification scope
- Expected certification timeframe
- Copy of Business Registration
- 申請機構必須填妥申請表並連同以下文件一併遞交到香港品質保證局:
- 機構基本資料
- 預期認證期限
- 認證範圍
- 商業登記證副本



#### Documentation Review 文件審閱

Upon acceptance of the application, applicant will need to submit further information. These include but not limited to the following document:

- Emission source inventory
- Organizational, operational and geographical boundaries
- Process flow/ layout plan
- Data management system
- Quantification methodology of carbon inventory

申請一旦被接納,申請機構須進一步提交資料,包括(但不限於)下列文件:

- 碳排放清單
- 數據管理系統
- 機構、營運和地域範圍
- 量化碳清單之方法
- 流程/規劃圖



#### On-Site Stage One Certification Audit 第一階段現場認證審核

Experienced HKQAA auditors will have a thorough review of the methodology for defining the certification scope, controlling the uncertainty of GHG calculation and identifying applicable statutory requirements.

香港品質保證局的經驗審核員將徹底審查,確定認證範圍、控制不確實的GHG計算器和鑒別適用的法定要求。



#### On-Site Stage Two Certification Audit 第二階段現場認證審核

Assess the carbon management system performance. A score will be marked against the 40 requirements set forth in the certification scheme.

評估「碳」管理體系的表現。評分將以認證計劃制 定的四十項要求來評定。



#### Certification Issuance 頒發認證

A Carbon Management System Certificate will be granted to organization meeting the certification criteria.

「碳」管理體系認證將給予符合認證標準的機構。



#### Surveillance Visit / Renewal Audit 監督審核及換證審核

To ensure continual conformity with the Carbon Management System certification requirements, surveillance visit will be arranged once every six months. In addition, renewal audit will be conducted once every three years.

為確保持續遵守「碳」管理體系認證要求,將安排每 六個月進行一次監督審核,而換證審核將於每三年 進行一次。

#### **Benefits**

- Demonstrate organization's commitment to environmental responsibility
- A BIG step moving towards carbon neutral
- Enable organization to communicate their greenhouse gas emission credential to their stakeholders in gaining reputation and goodwill
- Identify and reduce greenhouse gas emission by using a systematic approach
- Enhance staff and supplier awareness of the importance for combating climate change

The CarboMS™ Certification Scheme aims to provide organization with a management system framework in combating climate change. 40 carbon management system requirements were developed and classified into the following 8 key elements:

- Carbon Management Policy Establishment of a policy to lead the organization in combating climate change. The policy shall not violate any legal requirements and shall be communicated to all persons from all levels within the organization.
- Greenhouse Gas (GHG) Inventory Identification and estimation of the GHG emission within defined boundaries. The organization shall determine the base year of its GHG emissions and also measure the GHG emission uncertainty. When major changes occurred in the defined boundaries, recalculation of GHG inventory is required.
- Carbon Management Strategy and GHG Reduction Targets -Formulation of an effective carbon management strategy and identification of GHG reduction targets. The organization shall base on its carbon management policy to formulate a strategy for reducing its GHG emission.
- GHG Reduction and Offset Management Plan Establishment of a GHG reduction and offset management plan. The plan shall define the actions and time required to achieve the defined GHG reduction targets. It shall also be subjected to a regular review to ensure its suitability and adequacy.
- System and Operational Control Establishment of a carbon management system with consideration of organizational structure, management team appointment, staff competent, equipment maintenance, document and record control. The organization shall ensure effective control over the full scope of the defined boundaries.
- Internal and External Communication Implementation of an effective and efficient communication within and outside the organization. The organization shall ensure all relevant stakeholders are fully aware of the CarboMS<sup>™</sup> requirements and the importance of standard compliance.
- Monitoring and Measurement Establishment of a procedure to monitor and measure the progress and implementation of the GHG reduction and offsetting management plan. The organization shall plan and conduct internal audit on a regular basis.
- Management Review and Improvement Action Development of a management review mechanism to evaluate the suitability, adequacy and efficiency of the carbon management system. The organization shall also continually initiate improvement action for enhancing its carbon management system.

#### **Quantitative Certification**

The CarboMS<sup>™</sup> certification is a quantitative certification. It is based on a sophisticated scoring system to evaluate the compliance of certification requirements. CarboMS<sup>™</sup> certification will only be granted to organization obtaining a score meeting the minimum certification requirements.

The scoring system not only serves as an evaluation tool in the certification decision-making process, it also enables the participating organization to identify its strengths and weaknesses in their carbon management system. Hence, it helps organization to focus on the areas which needs further improvement.

#### 認證的益處

- 表明機構對環境保護負責任的承諾
- 向碳中和邁進一大步
- 讓持份者得悉機構鋭意減少排放溫室氣體,藉此提 高機構的名聲和商譽
- 使用系統性的方法識別和減低溫室氣體排放
- 提高員工和供應商對應付氣候變化的意識

CarboMS™認證計劃旨在為機構提供一個管理體系框架 以改善氣候變化問題。四十項碳管理體系要求可分為以 下八個要素:

- 碳管理政策 制定政策以帶領機構改善氣候變化問 題。這項政策不應與任何法律要求有衝突,並應讓 機構內各級員工了解政策的內容及含意。
- 溫室氣體 (GHG) 清單 識別和計算在確定範圍內的 GHG排放量。機構應確定基準年內的GHG排放量, 也應衡量GHG排放量的不確定情況。當確定的範圍 發生重大變化時,必須重新制定GHG清單。
- 碳管理策略及減少排放GHG目標 制定一個有效的 「碳」管理策略和確定GHG減排量目標。機構應根 據「碳」管理政策制定策略,以減少排放GHG。
- 減少或補償GHG排放的管理計劃 建立一個減少或 補償排放所須的計劃管理機構內容的運作及控制。 計劃應確定所需的措施和時間,以實現已確定的 GHG排放減量目標。應安排定期的審核,以確保計 劃的適合性和完整性。
- 體系與營運控制 建立一個「碳」管理體系,同時 考慮機構的結構、管理團隊的任命、員工的能力、 設備的保養、文件和記錄的控制。機構應確保有效地 控制已確定的「碳」管理體系範圍內的所有活動。
- 內部和對外溝通 實施有效和高效率的對內和對外 溝通渠道。機構應確保所有與持分者充分了解到遵 守CarboMS™要求和標準的重要性。
- 監管和測量 ─ 建立程序監管和衡量實施GHG減排量 和補償管理計劃的進展。機構應定期計劃及進行內 部審核。
- 管理審核和改善措施—建立管理評審機制,以評估 「碳」管理體系的適合性、完整性和效率。機構應 持續實行改善措施,以加強「碳」管理體系的效能。

#### 定量的認證

CarboMS™認證的特式是對體系實施表現進行定量的評 核,是一套精密的評分系統。符合認證要求且獲得高於 發證分數的機構,均可獲發CarboMS™證書。

評分機制不僅可以作為認證決策過程的評估工具,也使 各參與機構識別其「碳」管理體系的優缺點。因此,它 可以協助機構把重點放在需要改善的地方。



# International, Hong Kong & Mainland China 國際、香港及中國內地

#### International 國際

# ISO Takes a Strategic Look Forward to the Next Generation of ISO 9001

During its recent plenary meeting in Tokyo, ISO's Technical Committee TC176 took the opportunity to do some long-term strategic thinking about the future of its flagship ISO 9001 requirements standard. The ISO 9001:2008, published in November, was intended to make only small improvements and clarifications to the 2000 version, which was based on the "Eight quality management principles", developed in the mid-1990's and which will now also be reviewed in light of the latest trends in quality management. It must be stressed that there is no formal revision process underway yet for ISO 9001, and the outputs of the current exercise of ISO 9001:2008 will only result in the publication of a new version of the standard by around 2015 at the earliest.

Topics that were discussed by TC176 for possible incorporation in the future include:

- More emphasis on ensuring that the Quality Management system is effective in allowing the organization to deliver consistent (conforming!) products, in line with the philosophy that "Output matters".
- Incorporation of a risk-analysis approach to the planning of the QMS and to process management.
- Emphasis on the need for organizational agility to respond to changing market conditions (ability to respond to threats and take advantage of emerging opportunities).

# ISO 9004 Proceeds to the Final Draft International Stage

During its recent meeting in Tokyo, ISO's Technical Committee TC176 approved a resolution to advance the 2009 version of ISO 9004 to Final Draft International Standard ("FDIS") status. The new standard will be entitled "Managing for the sustained success of an organization - A quality management approach".

This has been a major overhaul of the structure and content of this guidance standard, which, in its Year 2000 version, was focused on Process Improvement. Over 1000 comments had been received from ISO member bodies on the Draft International Standard version of ISO 9004:2009, which was released late in 2008. These ranged from minor editorial changes to quite significant recommendations for improvement of the "Self-Assessment" methodology proposed in the Annex to the new standard. These have all been addressed and resolved by the ISO Task Group responsible for drafting the new standard and ISO 9004:2009 is now scheduled for publication around October/November of this year.

#### ISO 採取策略性期待 出版新一代ISO 9001國際標準

最近在東京舉行的全體會議中,ISO/TC 176技術委員會藉此機會對未來ISO 9001標準的主要作出長遠的策略性思考。於去年十一月推出的ISO 9001:2008中,標準內容只是對九零年代中期發展的「八項質量管理原則」(按照最新的質量管理趨勢)作出輕微的修改和澄清2000年版的條文。必須強調的是,ISO 9001:2008的結果只會收錄在新版的標準內,預計最早在2015年出版。

TC 176技術委員會討論了將來可能納入的主題,包括:

- 強調質量管理體系能有效地使機構提供穩定(符合要求)的產品,符合「產品重要性」的哲學。
- 把風險分析的方法納入質量管理體系和流程管理的計 劃中。
- 強調機構需要靈活應對不斷變化的市場情況(處理威 脅和把握機會的能力)。

#### ISO 9004進入國際標準草案最後階段

最近在東京舉行的會議中,ISO/TC 176技術委員會批准 了一項決議推行ISO9004:2009年版最終草案("FDIS")。 新標準稱為《組織機構達致持續成功-質量管理方法》。

這是一個在指引標準的結構和內容上的重大改革,因為2000年版本著重於流程改進。ISO小組成員收到逾千個對在2008年推出的ISO 9004:2009國際標準草案的意見,意見範圍包括輕微的修改以至較明顯的建議以改善附錄中提議的「自我評估」的方法。這些都得到負責起草新標準的ISO工作小組的處理和解決。ISO 9004:2009現定於今年十月或十一月左右出版。





#### Hong Kong & Mainland China 香港及中國內地

## Certificates Issued to GB/T19001-2000 National Standard Invalid from mid-November

The Certification and Accreditation Administration of the People's Republic of China (CNCA) announced that all certification bodies would cease to issue GB/T 19001-2000 certificates from 15 November 2009 and any 2000 version certificates would be invalid after 15 November 2010. The updated version of national standard GB/T 19001-2000 was developed according to the international version with combination of implementation and practice of GB/T 19000 series. It has been amended to deliver clearer and more precise information about the requirements of the standard.

It was also announced that certification bodies would need to provide accurate information about conversion to the update standard. The 2008 version of the certificate can only be issued to those companies who conform to the requirements. Certification bodies will require companies not meeting the requirements to make improvements and will assist them to implement the new standard.

#### **Public Environmental Protection Index Released**

Recently, the first national environmental index, the "Public Environment Protection Index 2008", designed by the China Environment Culture Protection Association (CECPA), was officially released in Beijing. This survey showed that environmental protection is still one of the hottest issues in China, third only to the commodity prices and food safety. The index is released every year, and it is issued the fourth time after its first released in 2005. The survey sampled 9,593 organizations in thirty-one provincial cities and municipalities, excluding HKSAR, Macau SAR and Taiwan.

The results showed that the public awareness of environmental protection scored 44.5, environmental behavior scored 37.0 and the environmental satisfaction scored 45.1. Comparing to the results from last year, stable increase in all three indices are observed. These figures indicate an increase in public awareness of environmental protection, which could be the result of active promotion by the Chinese government in recent years.

#### China Takes a Leading Role in New ISO Standard

China has been leading the way in drafting the standard Pubic Information Guiding System Part I: Design Principles and Requirements for Sketch Maps and Direction Boards. The standard is at the voting stage of the review process and will be published soon.

This standard regulates the design principles and requirements for public information symbols which are commonly seen in public areas such as supermarkets, parks, roads, stadiums, bus stops, airports, hotels and restaurants. At the moment, there is no standard governing this area and so the release of the Chinese standard will fill a much-needed gap.

#### GB/T19001-2000版標準認證證書11月 停發

國家認監委日前發出通知,要求認證機構自2009年11月 15日起,不得再頒發GB/T 19001-2000版標準認證證書, 2010年11月15日起,任何2000版的證書均屬無效。修訂 後的國家標準GB/T 19001-2000不僅對原文變化部分做 出了修改,更結合採用GB/T 19000族標準的實踐,進行 了修正,以更清晰、明確地表達了標準的要求。

通知還規定各認證機構在轉版認證過程中,需向企業正確傳達標準換版的信息,確認獲證企業已符合2008版標準要求,才可換發2008版標準證書。對存在問題或不達2008版標準要求的企業,認證機構提出整改要求,並協助企業把管理體系與GB/T19001-2008標準結合。

#### 中國公眾環保指數出爐

由中國環境文化促進會編制的國內首個環保年度指數「中國公眾環保指數(2008)」在北京正式發布。本次調查顯示,環境污染問題依然是公眾最關注的熱點之一,僅次於位於物價和食品安全問題。據了解,該指數每年初發布一次,本次是自2005年以來第四次發布,調查範圍在中國三十一個省會城市和直轄市進行,港澳台除外,抽取樣本總數達到9,593份。

本次調查結果顯示公眾的環保意識總體得分為44.5分,環保行為得分為37.0分,環保滿意度得分為45.1分。三項指標相對於去年來說均有一定程度的提高,反映近年來中國政府不斷加強環保宣傳取得了一定的積極效果,同時也反映了公眾自身環保素質的提高。

#### 中國主導一項ISO標準有望填補國際空白

中國主導起草的ISO《公共信息導向系統第一部分:示意 圖和導向圖的設計原則及要求》標準,已正式進入意見 徵詢投票階段,有望正式成為ISO國際標準。

據了解,這項標準規範的是人們在超市、公園、道路、體育場館、車站、機場、賓館、飯店等公共場所常見的公共信息導向圖形符號的設計原則和要求。在過去的二十多年裡,ISO圖形符號標準化工作主要集中在圖形符號創制、具體符號的標準化方面,而沒有站在公共信息導向系統的高度開展標準化工作。因此,該標準的制定填補了ISO圖形符號標準化領域的空白。

# Building a Total Involvement Culture 建立全體投入的文化

Since 1993, many subsidiary companies under Chun Wo Development Holdings Limited (Chun Wo) have obtained the Quality Management System Certificate and Environmental Management System Certificate. In particular, Chun Wo Construction & Engineering Co., Ltd obtained all three certificates in the Integrated Management System, namely ISO 9001 Quality Management System, ISO 14001 Environmental Management System and OHSAS 18001 Occupational Health & Safety Management System, which are all accredited by UKAS. In this issue, we have invited Mr Peter C. K. Kwan, General Manager (Compliance) of Chun Wo Construction & Engineering Co., Ltd. to share his insights and hands-on experience of implementing the system with our readers.



For years, Chun Wo has implemented a set of safety management system and has developed a culture of occupational health and safety. Mr Kwan believes that it is important to take the lead in the market, but it is not necessary to be a pioneer. He would rather learn from the pioneer and make improvements accordingly, avoiding mistakes so that cost effectiveness can be increased. "Given that adopting a new corporate culture may lead to dissenting voices, Chun Wo takes an organic



approach so as to reach a consensus and make the best use of variety of occasions, such as morning briefing session and regular general meeting, to enhance communication among middle and senior management staff," says Mr Kwan. "The Group has also introduced promotional videos produced by the Occupational Safety & Health Council to remind us of the importance and advantages of attending to this area. As a result, not many difficulties were encountered when we implemented the OHSAS 18001," he added.

"Good safety performance bring good business," Kwan continued. "In the past, with the efforts of our staff, the performance on our work sites has been improved: last year's accident rate was only 0.34 per 100,000 working hours, which is a very outstanding result. As the saying goes, 'Good craftsmanship requires sharp tools', so our foremen and sub-contractors have acquired the qualification for safety supervisors to ensure our staff are professionally qualified in site safety."

#### **Award Scheme Encourages Our People**

According to Kwan, other measures are used to encourage safety: "Apart from providing regular training courses to our staff for improving their awareness of occupational safety and health, Chun Wo also promotes an award scheme which aims to encourage staff with outstanding performance in occupational health and safety, by giving them vouchers or even cash. Different types of safety training courses are given to different grades of staff to meet their actual needs. "Kwan emphasized that the management system is not standardized and inflexible. Rather, it is a culture and set of core values which encourages everyone to comply with requirements because they want to. In short, "Do it right from the bottom of your heart!"



自一九九三年,俊和發展集團核下已有多家公司考取質量管理體系及環境管理體系的證書。旗下的俊和建築工程有限公司在綜合管理體系中所考獲的三張證書,ISO 9001質量管理體系、ISO 14001環境管理體系及OHSAS 18001職業健康和安全管理體系證書均獲得英國認可局(UKAS)認可。今期我們邀請到俊和建築工程有限公司總經理(規範管理)關泉堅先生與《管略》讀者分享推行職安健管理體系背後的理念和實踐經驗。

#### 領先者與先驅者

多年來,俊和已自行在企業內執行一套安全管理體系,開始建立職安健文化,希望讓同事了解職安健的重要性。關先生相信,領先是很重要的,但成為先驅者卻不一定必須的。從前人身上汲取經驗再加以改善,減少出錯機會能有助增加成本效益,我們務求在同業或客戶提出需求前便裝備好自己。關先生坦言:「執行新的企業文化時,往往會出現反對聲音,所以俊和會使用人性化的手法,醞釀共識,善用多種場合,如早會及例會,增加中層與高層管理人員之間的相向溝通。我們亦會引用職業安全健康局的宣傳片段,深化前線人員對職安健認識及好處,所以我們在推行OHSAS 18001時,沒有遇到太大的困難和阻力。

關先生續說:「有良好的安全紀錄,才有良好的發展商機。 過往在各員工的共同努力下,我們在地盤安全的工作不斷有 進步,去年的意外率僅為每十萬工時零點三四,是一個相當 理想的成績。正所謂:『工欲善其事,必先利其器』,我們聘 用的管工、判頭等員工均考獲安全督導員的資格,以確 保大家都有一定的安全專業水平。」

#### 獎勵計劃 鼓勵員工

除了定期舉行相關的課程培訓提高俊和員工對職安健的意識外,更會實行獎勵計劃鼓勵表現傑出的員工,例如派發現金券或獎金,藉此令員工更積極工作;同時,公司亦會為員工安排安全培訓課程,加深員工對職安健的認識。最後,關先生強調,管理體系的有效性不在於規範化,而是建立一套文化、一個核心價值,使每個人發自內心的遵從體系的要求,簡單一句:即「用心去做」!



# New Certified Clients 新認證客戶

Nov 2008 to Jan 2009 | 2008年11月至2009年









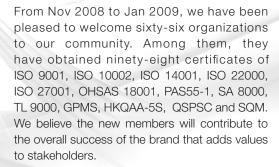


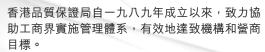
### Memorable Moments 紀念

一刻



Hong Kong Quality Assurance Agency (HKQAA) has been helping industrial and commercial bodies to develop effective management systems to achieve organizational and business goals since 1989.







由二零零八年十一月至二零零九一月期間, 香港品質保證局共頒發九十八張證書,包括 ISO 9001, ISO 10002, ISO 14001, ISO 22000, ISO 27001, OHSAS 18001, PAS55-1, SA 8000, TL 9000, GPMS, HKQAA-5S, QSPSC 和 SQM,

在此謹祝賀六十六家機構加入獲認證的行列。本 局深信,新成員的加入將可為我們的品牌和利 益相關方面帶來更大的裨益。



















# Training Schedule 培訓課程 Apr to Jul 2009 | 2009年4月至7月

### Hong Kong 香港

	Hong Kong 香港						
	Course Title 課程名稱		Fee (per head) HKD 收費 (每人) 港幣	Course Code & Date 課程編號及日期			
	Quality 質量	IN 主义及 (人)	<b>以</b> 县 (马八) /6市	Apr 四月	May 五月	Jun 六月	Jul 七月
	ISO 2001-2008 Quality Management Systems Introduction	Half-day	Free		QMS1C/HK-05A		QMS1C/HK-07A
	ISO 9001:2008 恆晶管理體系一入門 ISO 9001:2008 恆晶管理體系一入門 ISO 9001:2008 仅uality Management Systems - Understanding & Application ISO 9001:2008 恆晶管理體系 — 理解與應用		免費 HKD 1,300	VM1C/HK-04A	<b>18</b> VM1C/HK-05A	VM1C/HK-06A	<b>2</b> VM1C/HK-07A
	100 See Level & Editor Land			<b>15</b> VM3C/HK-04A	<b>5</b> VM3C/HK-05A	15 VM3C/HK-06A	6 VM3C/HK-07A
	ISO 9001:2008 質量管理體系一內部質量管理體系審核員培訓	1	HKD 2,800	20-21	<b>21-22</b> QMS5C/HK-05A	25-26	13-14
	ISO 9001:2008 Quality Management Systems - Advanced Internal Auditing Techniques ISO 9001:2008 質量管理體系 — 進階內部審核技巧 ISO 9001:2008 Quality Management Systems Auditor/Lead Auditor Transition Course Update ISO 9001:2008 質量管理體系 — 主任審核員新版演學埃訓課程	2	HKD 3,000		11-12 S059E/HK-05A		
	ISO 9001:2008 Quality Mariagement Systems Adulto/Lead Adulto/Transition Course Opdate ISO 9001:2008 質量管理體系 — 主任審核員新版演變培訓課程	1	HKD 1,600/ HKD 1,500*		25		
	ISO 9001:2008 頁單旨建語系一主任备核貝利成演奏培訓詠任 ISO 9001:2008 Quality Management Systems Auditor/Lead Auditor Transition Course Update ISO 9001:2008 質量管理體系一主任審核員新版演變培訓課程(於澳門舉行)	1	HKD 1,600/ HKD 1,350*		S059E/MU-05B MU 29		
EW 新課籍	Business Sustainability: Key to Long-Term Success 業務持續發展 — 長遠成功之道	1	HKD 1,880/ HKD 1,680*		S065E/HK-05A <b>27</b>		
	Quality Management Systems Auditor/Lead Auditor Training Course (IRCA Reg. #A17071) 質量管理體系 — 主任審核員證書培訓課程 (IRCA 註冊號#A17071)	5	HKD 11,000/ HKD 9,900*	IQA1/IRCA/04 2-3 & 6-8			
	Environment 環境						
	ISO 14001:2004 Environmental Management Systems - Understanding & Application ISO 14001:2004 環境管理體系 — 理解與應用	1	HKD 1,500/ HKD 1,300*	EMS2C/HK-04A <b>17</b>		EMS2C/HK-06A <b>4</b>	EMS2C/HK-07A <b>10</b>
	ISO 14001:2004 Environmental Management Systems - Internal EMS Auditor Training ISO 14001:2004 環境管理體系 — 內部環境管理體系審核員培訓	2	HKD 3,000/ HKD 2,700*		EMS3C/HK-05A <b>26-27</b>	EMS3C/HK-06A <b>29-30</b>	
	Occupational Health and Safety 職業健康和安全						
	Risk Assessment for Safety Management Implementation 安全管理之風險評估及措施	1	HKD 1,500	OHO4C/HK-O4A <b>27</b>			
ΕN	Understand the Legal Requirements and the Implementation of OSH and Risk Management (for Disciplinary Sector)	1	HKD 4 E00				OH05C/HK-07A <b>16</b>
新課者	▶ 認識職業安全法例及實施健康風險管理(紀律部隊)	_) '	HKD 1,500				10
	OHSAS 18001:2007 Occupational Health and Safety Management Systems - Understanding & Application OHSAS 18001:2007 職業健康和安全管理體系 — 理解與應用	1	HKD 1,500	OHS8C/HK-04A <b>29</b>		OHS8C/HK-06A <b>22</b>	
	OHSAS 18001:2007 Occupational Health and Safety Management Systems - Internal OHS Auditor Training	2	LIKD 2 000		OHS9C/HK-05A <b>7-8</b>		OHS9C/HK-07A <b>30-31</b>
	OHSAS 18001:2007 職業健康和安全管理體系 — 內部職業健康和安全管理體系 審核員培訓	2	HKD 3,000				
E W 斯課	OHSAS 18001 Occupational Health and Safety Management Systems Auditor/ Lead Auditor Course	5	HKD 10,000/			OH06E/HK-06A 1-3 & 8-9	
	OHSAS 18001 職業健康和安全管理體系 — 主任審核員證書培訓課程		HKD 9,500*				
	Food Safety 食品安全						000
	Hygiene Control System - Understanding & Implementation 衛生監控系統 — 理解與實施	1	HKD 1,300				GP02C/HK-07A 6
	Implementing HACCP for Food Businesses Programme 實踐食物安全重點控制課程	2	HKD 2,800				HA10C/HK-07A 27-28
	ISO 22000:2005 Food Safety Management Systems Implementation Course [NTTS Approved Course]	3	HKD 5,200/	HA9C/HK-04A <b>1-3</b>			
	ISO 22000:2005 實施食品安全管理體系課程 [NTTS認可課程] ISO 22000:2005 Food Safety Management Systems Auditor/Lead Auditor Course		HKD 4,800*			IRCA/FSMS/06	
	(IRCA Reg.#17289) [NTTS Approved Course] ISO 22000:2005食品安全管理體系-主任審核員證書培訓課程	5	HKD 10,000 <sup>#</sup>			4-5 & 10-12	
	(IRCA 註冊號#17289) [NTTS認可課程]						
	Customer Satisfaction 顧客滿意 ISO 10002:2004 Customer Satisfaction - Guidelines for Complaints Handling -				1	MT14C/HK-06A	
	Understanding & Application ISO 10002:2004 SP 滿意度 — 投訴處理指引 — 理解與應用	1	HKD 1,300			5	
E W 所課	Service Excellence through Quality Customer Contact Handling 優質顧客服務之來電處理	1	HKD 1,300				EW14C/HK-07A
7	Information Security 信息安全						
	ISO 27001:2005 Information Security Management Systems Lead Auditor Training Course		111/5		ISE6/IRCA/05		
EV 新課料	(IRCA Reg.#A17321) [NTTS Approved Course] ISO 27001:2005 信息安全管理體系 — 主任審核員證書培訓課程 (IRCA 註冊號#A17321) [NTTS認可課程]	5	HKD 12,000/ HKD 11,000**		11-15		
	Management Tools and Skills 管理工具和技能						
	Implementation of HKQAA 5S in the Workplace Operation 實施HKQAA—5S 在工作間的營運	1	HKD 1,300				GP03C/HK-07A <b>3</b>
	The Must-know Essentials for Quality System Management Representative 質量管理體系 — 管理者代表的重要須知	) 1	HKD 1,300			MT23C/HK-06A <b>8</b>	
	夏重自任語が 自任信 (ARD)主要項別 Getting the Best Out of Six Sigma (Green Belt Certification) 從六西格瑪中獲取最佳效益(緑帶語書)		HKD 5,000/ HKD 4,500*			J	EW01C/HK-07A
	[K/] [ [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]		TIND 4,500"				15, 22 & 29

### Remarks 備註

<sup>\*</sup> Delegates who register and settle the payment 3 weeks before the class can entitle for early bird discount 凡於開課前最少三星期報名並繳付所有學費,可享有指定的優先報名優惠

<sup>#</sup> NTTS approved course with 50% course fee reimbursement NTTS認可課程可獲退回50%的課程費用

<sup>\*\*</sup> For QuEST Forum Members 只限QuEST論壇會員

### Mainland China 中國內地

Course Title	Duration (Day) 課程長度 (天)	Fee (per head) RMB 收費(每人)人民幣	Course Code & Date 課程編號及日期				
課程名稱			Apr 四月	May 五月	Jun 六月	Jul 七月	
Quality 質量							
ISO 9001:2000 Quality Management Systems - Introduction ISO 9001:2000 質量管理體系 — 入門	P	Half Day 半天	Free 免費			QMS1P/SZ-06A SU 15	QMS1P/SZ-07A SU 17
ISO 9001:2008 Quality Management Systems - Understanding & Application ISO 9001:2008 質量管理體系 — 理解與應用	P	) 1	RMB 600	VM1P/GZ-04A GZ 27 VM1P/SH-04A SH 27		VM1P/GZ-06A GZ 8	VM1P/GZ-07A GZ 27 VM1P/SH-07A SH 29
ISO 9001:2008 Quality Management Systems - Internal QMS Auditor Training ISO 9001:2008 質量管理體系 — 內部質量管理體系審核員培訓	P	) 2	RMB 1,200	VM3P/GZ-04A GZ 28-29 VM3P/SH-04A SH 28-29		VM3P/GZ-06A GZ 9-10	VM3P/GZ-07A GZ 28-29 VM3P/SH-07A SH 30-31
ISO 9001:2008 Quality Management Systems Internal Auditor Transition Training ISO 9001:2008 質量管理體系內審員轉版培訓	P	) 1	RMB 800	<b>311</b> 20 20	VM4P/SH-05A SH 25		5,,, 5,, 5,
Environment 環境							
ISO 14001:2004 Environmental Management Systems - Understanding & Application ISO 14001:2004 環境管理體系 — 理解與應用	P	) 1	RMB 600			EMS2P/GZ-06A GZ 1	EMS2P/GZ-07A  GZ 13  EMS2P/SH-07A  SH 6
ISO 14001:2004 Environmental Management Systems - Internal EMS Auditor Training ISO 14001:2004 環境管理體系 — 內部環境管理體系審核員培訓	P	) 2	RMB 1,200			EMS3P/GZ-06A GZ 2-3	
Occupational Health and Safety 職業健康和安全							
OHSAS 18001:2007 Occupational Health and Safety Management Systems - Understanding & Application OHSAS 18001:2007 職業健康和安全管理體系 — 理解與應用	P	) 1	RMB 600	OHS8P/GZ-04A <b>GZ</b> 15		OHS8P/GZ-06A GZ 24	
OHSAS 18001:2007 Occupational Health and Safety Management Systems - Internal OHS Auditor Training OHSAS 18001:2007 職業健康和安全管理體系 — 內部職業健康和安全管理體系審核員培訓	P	) 2	RMB 1,200	OHS9P/GZ-04A <b>GZ 16-17</b>		OHS9P/GZ-06A GZ 25-26	
Food Safety 食品安全							
ISO22000:2005 Food Safety Management Systems - Internal FSMS Auditor Training 食品安全管理體系 — 內部食品安全管理體系審核員培訓	P	2	RMB 1,500	HA7P/GZ-05A GZ 14-15			
Social Accountability 社會責任							
SA 8000:2001 Social Accountability Management Systems - Internal Auditor Training SA 8000:2001 社會責任管理體系 — 內部審核員培訓	P	) 2	RMB 1,200		SA01P/GZ-05A GZ 21-22		SA01P/GZ-07A GZ 9-10
Telecommunications and Information Service 電訊和	1資訊	服務					
TL 9000 R4.0 Quality Managerment Systems - Internal Auditor Training TL 9000 R4.0 質量管理體系 — 內部審核員培訓	P		RMB 3,800	TLO4P/SH-04A SH 15-17 TLO4P/SZ-04A SU 22-24	TL04P/GZ-05A <b>GZ 25-27</b>	TL04P/SH-06A SH 17-19	
TL 9000 R4.0 Quality Managerment Systems - Auditing (QuEST Forum Sanctioned Trair TL 9000 R4.0 質量管理體系審核課程(QuEST 論壇認可課程)	ning)P	) 3	RMB 7,740/ RMB 7,200**		TL02P/GZ-05A <b>GZ 6-8</b>		

For registration and enquiry 報名及查詢

Hong Kong Office 香港辦事處。Tel 電話: (852) 2202 9111。Email 電郵: training@hkqaa.org

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For training course details and online registration, please visit HKQAA website 詳細課程資料及網上報名,請瀏覽香港品質保證局網頁 http://www.hkqaa.org



# 盈·未來」研討會

分享不同營商策略。讓企業各取所需。盈接未來



目前,全球經濟仍處於低迷時期,而企業亦面對著前所未有的挑戰。在此急劇轉變的營商環境中企業應如何自處,化危為機?企業應如何調整營商策略,在動盪的環境下尋求穩健的發展路向?

日期:2009.05.22 (星期五)

時間: 14:30 - 17:30

地點: 香港城市大學專業進修學院金鐘教學中心

香港金鐘道95號統一中心8樓

#### 研討會內容:

共分四個環節,詳細剖析企業在不景氣環境下持續發展的種種竅門,助企業突圍而出。

1. 應變技巧借鑑:從知名企業的成功經驗中學習,利用不同策略及部署,安然渡過經濟起伏週期;

2. 客觀環境評估:如何有系統地分析行業的營商環境,為企業設計適切的營商策略;

3. 權威理論實践:淺釋近代最具影響力及啟發性的營商策略,助企業運籌帷幄,決勝千里;

4. 強化創富程式:何謂「利潤鏈」?如何透過「利潤鏈」量度企業創造利潤過程的成效。

查詢: 2202 9111

網頁:http://www.hkgaa.org

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