VISION 管略

Issue 52 第五十二期 ｜ 7 · 2014

Introduction to ISO 55001:2014 Asset Management System
剖析ISO 55001:2014資產管理體系

Sharing by Drainage Services Department: Developing a Strategic Asset Management System
渠務署分享：發展策略性資產管理體系

New version of ISO 14001 on schedule for 2015
新版ISO 14001預期2015年面世

TL 9000 Introduces New Security Requirements for ICT
TL 9000為資訊及通訊科技引入新的安全要求

HKQAA
HONG KONG QUALITY ASSURANCE AGENCY
香港品質保證局

Contents 內容

From the Editor 編者的話

Optimising asset performance to increase competitiveness

The concept of "asset management", to many, is confined to financial management and investment. However, the term "asset" can also refer to physical assets like facilities, goods and properties. Without doubt, the performance in managing various types of assets will have a great influence on the competitiveness of an organisation.

Let's take capital-intensive organisations like processing and manufacturing industries, energy, mining, public transportation and utilities as examples. Their most significant expenditure, risks, dependencies and efforts are associated with physical assets. If organisations can effectively manage these assets, they will definitely benefit in terms of increased operational and financial performance.

Specifically, asset management helps organisations reduce maintenance costs and increase the life and reliability of equipment, as well as better utilising the equipment and components required to support business operations. Optimising the investment returns of assets will help improve an organisation's bottom line.

In addition, it will enable organisations to increase competitiveness through continual improvement in operational performance. The corporate image can also be enhanced by demonstrating to investors, regulatory institutions and other stakeholders that their assets deliver quality products and services at an optimal cost.

Asset management is increasingly valued by industry, and ISO launched the ISO 55001 asset management system standard in early 2014. This standard offers a holistic framework organisations can use to systematically manage, in a sustainable manner, the performance of all types of assets over their life cycle.

As a leading conformity assessment body in the region, HKQAA has taken the lead to provide ISO 55001 certification services this year. It is our pleasure to see that some organisations have successfully obtained this certification and demonstrated their asset management competence. With the support of industry and various parties, we believe that quality asset management will become even more popular in the future.

優化資產表現，提升競爭優勢

對不少人來說，「資產管理」的概念只局限於財務管理及投資。然而，「資產」一詞所涵蓋的範疇其實很廣泛，還可以包括設施、貨物、物業等實物資產。誠然，一間機構的競爭能力，往往與管理各類資產的表現有莫大關係。

就以資產密集型的機構為例，如加工及製造業、能源供應、採礦、公共運輸及公用服務機構等，其最主要的支出、風險、依賴和投入的資源，都與實物資產息息相關。如果機構能夠有效地管理這些資產，無論在營運或財務表現上，都會有所裨益。

具體來說，資產管理不但有助這些機構減省維修保養的開支，延長設備的壽命及提高其可靠性，還可進一步善用支持營運需要的設備和元件，從而優化資產的投資回報，提升企業的財務績效。

另一方面，機構因為資產的營運表現持續改善，既加強了競爭優勢；又可以向投資者、監管機構及其他持份者，展現它的資產能以最佳成本提供具質素的產品或服務，令企業形象有所提升。

正因如此，資產管理近年日益受到業界重視。國際標準化組織(ISO)更於今年初推出ISO 55001資產管理體系標準，為任何機構提供了實用的框架，系統化地管理各類資產在生命週期中的表現，以配合機構的可持續發展。

本局作為區內具領導地位的合格評定機構，今年亦率先提供了ISO 55001認證服務，並很高興已有機構成功取得認證，展示其資產管理的能力。相信未來在業界各方的攜手推動下，將可進一步促進優質資產管理的普及化。

Introduction to ISO 55001:2014 Asset Management System
剖析 ISO 55001:2014 資產管理體系

Mr K Y Ng
Principal Auditor, HKQAA
吳國有先生
香港品質保證局首席審核員

In the commercial world, an "asset" is usually associated with property, capital, funds and resources. Asset management is commonly associated with financial asset management. Financial asset management focuses on managing investments for financial returns, but the concept of asset management can also be applied to all types of organisations and assets. No matter what industry you are in, you will need to make use of different types of asset to facilitate the achievement of your organisation goals. Your organisation's assets may include physical assets such as equipment, facilities, tools, inventory and property, as well as financial assets, human assets and intellectual assets. Like financial asset management, physical asset management is concerned with returns on investment through managing the operation and performance of facilities throughout their life cycle.

In January 2014, the International Organization for Standardization published a new set of three international standards to help organisations achieve their objectives through the effective and efficient management of their assets:

- ISO 55000 – provides an overview of asset management and asset management systems
- ISO 55001 – specifies the requirements of an asset management system
- ISO 55002 – provides guidance for the application of an asset management system in accordance with the requirements of ISO 55001

This new series of international standards will replace the PAS 55 series of standards, which concentrated on the management of physical assets.

Asset management supports the realisation of value from assets in the achievement of organisational objectives, while balancing financial, environmental and social costs, risk, quality service and performance related to assets. The key difference with PAS 55 is that, though ISO 55001 is primarily intended for managing physical assets, it can also be applied to other asset types, including non-physical assets. According to the Institute of Asset Management, the PAS 55 standards will be superseded on 15 January 2015. With the new ISO 55001 standard, we expect more industries and organisations to benefit from adopting a structured approach to asset management.

Key requirements of ISO 55001:2014

ISO 55000 defines an asset as an "item, thing or entity that has potential or actual value to an organisation". Physical assets usually refer to equipment, inventory and property owned by the organisation. Non physical assets may include leases, brands, digital assets, use rights, licences, intellectual property rights, reputation and agreements.

The following is an overview of the key clauses of the standard:

Clause 4　Context of the organisation
When establishing or reviewing its asset management system, an organisation should consider its internal and external context. The external context includes the social, cultural, economic and physical environment, together with regulatory, financial and other constraints. The internal context includes organisation culture and environment, as well as the mission, vision and values of the organisation. The context of an organisation should also take into account its stakeholder inputs, concerns and expectations.

在商業社會，「資產」一詞可指物業、資本、資金及各種不同類型的資源。通常一般人都認為「資產管理」是指如何打理金融資產，透過財務管理去獲得投資回報。然而，這只是資產管理的其中一種。誠然，無論任何行業的機構，都會運用不同類型的資產來實現既定的目標，例如金融、人力和技術上的資產，以及設備、設施、工具、貨物、物業等實物資產。只要能夠適當地管理實物資產在生命週期中的運作和表現，便可以像管理金融資產那樣，達成投資回報的目標。

為幫助機構建立具高效率和效益的資產管理體系，2014年1月，國際標準化組織（ISO）出版了一套三份的新國際標準：

- ISO 55000——為資產管理和資產管理體系的綜覽
- ISO 55001——詳列資產管理體系的要求
- ISO 55002——根據 ISO 55001 的要求，提供應用資產管理體系的指引

這套新標準將取代主要著重實物資產管理的 PAS 55 系列標準。

資產管理的目的，是讓資產在實現機構目標的過程中變現價值，同時平衡與資產相關的其他考慮因素，例如財務、環境及社會風險和成本、服務水平及效益等。ISO 55001 與 PAS 55 的分別之處，在於 ISO 55001 雖然主要針對實物資產，但也可應用於其他非實物資產。英國資產管理協會表示，PAS 55 標準將於 2015 年 1 月 15 日被取代，相信新的 ISO 55001 標準會日益普及，幫助機構從規範化的資產管理得到好處。

ISO 55001:2014 的重點要求

ISO 55000 將資產定義為「對機構有潛在或實際價值的物件、事物或個體」。實物資產通常是指機構擁有的設備、貨物、物業等，而非實物資產則包括租契、品牌、數碼資產、使用權、牌照、知識產權、聲譽、協議書等。

下文列出 ISO 55001 的重點條文：

條文 4　機構環境
機構在建立或檢討資產管理體系時，需審視其內部與外部環境。外部環境包括社會、文化、經濟和現實環境，以及法律法規、財政和其他限制；內部環境則包括機構的文化和環境、使命、願景和價值觀。此外，持份者的意見、顧慮和期望，也會對機構的環境有所影響。

Clause 5　Leadership

Top management should develop an asset management policy and asset management objectives which are aligned with the organisational objectives. Leaders at all levels of an organisation are involved in the planning, implementation and operation of the asset management system. Top management creates the environment for the asset management system through defining the responsibilities, accountabilities and asset management objectives and strategies.

Appropriate resources should be provided by the top management and leaders at all levels to support the asset management system. These resources include funding, adequate and competent human resources, as well as information technology support.

Top management and leaders at all levels should communicate the organisation's asset management objectives and the importance of its asset management system to all employees, customers, suppliers, contractors and other stakeholders.

條文5　領導

管理層應制訂與機構目標相符的資產管理政策和目標。機構各階層的管理人員,都必須參與管理體系的策劃、推行和營運過程,而最高領導層則要制訂管理體系的目標、策略和權責,營造適合管理體系運行的環境。

各領導層應提供適當的資源,包括資金、足夠和合適的人才、資訊科技等,以支援管理體系的運作。

各領導層應與所有員工、顧客、供應商、承辦商及其他持份者保持溝通,傳達管理體系的目標和重要性。

Clause 6　Planning

The organisation should consider the issues related to its context and the needs of stakeholders and determine the risks and opportunities that need to be addressed. The organisation should establish processes for managing its asset management related risks, including contingency planning.

Asset management objectives should be established at relevant functions and levels. The approach to implementing the principles of applying asset management to achieve the organisational objectives should be documented in a strategic asset management plan.

The asset management plans should define the activities to be undertaken in relation to assets, and should specify measurable objectives. Aligning the asset management objectives with organisational objectives, as well as linking asset reports to financial reports, can improve the organisation's effectiveness and efficiency.

條文6　策劃

機構應根據自身的環境和持份者的需要,判斷要應對的風險和機遇,並定立相應的處理程序,例如應急計劃。

機構應給相關的部門和崗位定立資產管理目標,並透過制訂資產管理策略計劃,詳述如何應用資產管理的原則來實現機構目標。

機構應在資產管理策略計劃中,確立所須執行的工作,以及定立可量度的目標。而制訂與機構目標一致的管理體系目標,以及將資產狀況與財政報告聯繫,可有助提升機構的效益和效率。

Clause 7　Support

The asset management system requires collaboration and the sharing of resources and promotes awareness of asset management objectives across the whole organisation.

The competency requirements for personnel involved in asset management should be specified. The implementation, maintenance, evaluation and improvement of these competencies require cooperation with the organisation's human resource management system.

The organisation needs to determine its information requirements to support its asset management system. Creating, controlling and documenting this information are critical functions of the asset management system.

條文7　支援

推行資產管理體系時,需要機構上下通力合作、分享資源,讓各成員清楚資產管理的目標。

機構應清楚列明相關人員的能力要求,以及與人力資源管理體系互相配合,得以善用、維持、評估和改善人才能力。

機構要界定支持資產管理體系運作所需的資訊。而建立、控制和記錄這些資訊是資產管理體系的重要功能。

Clause 8　Operation

The organisation should plan, implement and control the processes required to maintain the asset management system, including those that have been outsourced. Operation of the asset management system sometimes requires planned changes, which can introduce new risks. The asset management system should include risk assessment and control of change.

The organisation should determine how the outsourced activities will be controlled and integrated into the organisation's asset management system.

條文8　營運

為了維持管理體系的運作,機構應制訂、實行及控制相關的程序(包括外判的工序)。當管理體系運作時,有時需要作出修正,並可能衍生出新的風險,因此體系本身應該要包含風險評估和變更控制的程序。

機構亦應考慮如何監控外判的工序,以及將其融入管理體系的運作中。

Clause 9　Performance evaluation

The organisation should evaluate the performance of its assets, its asset management and its asset management system. Performance measures can be direct or indirect, financial or non-financial.

Asset management performance should be evaluated against whether the asset management objectives have been achieved, and if not, why not. Periodic audits should be used to evaluate the performance of the asset management system. The results of performance evaluation should be used as inputs into management reviews.

條文9　績效評估

機構應評估其資產、資產管理和管理體系的表現。評估可以直接或間接的形式,以及從財政或非財政的角度去進行。

評估資產管理的標準是在於其能否實現既定的管理目標,以及審視實現不到的原因。機構應對管理體系進行定期審核,並將評審結果交予管理層作評審。

Clause 10　Improvement

Opportunities for improvement can be determined directly through monitoring the performance of the asset management system and asset performance. The nonconformities require corrective action and the potential nonconformities require preventive action.

Asset-related incidents should be investigated and reviewed to determine if any improvements are required to prevent their recurrence and to mitigate their effects.

條文10　改進

透過監控資產和資產管理體系的表現,可以直接找出改進的空間;如有不合格項或潛在不合格項,需分別進行糾正及預防措施。

此外,如發生了與資產相關的意外,應進行調查及檢討,考慮是否需要作出改進,以防止再次發生及減低其影響。

Bibliography 參考資料
- BSI PAS 55-1:2008, Asset Management – Part 1: Specification for the optimized management of physical assets
- ISO 55000:2004, Asset Management – Overview, principles and terminology
- ISO 55001:2004, Asset management – Management systems – Requirements
- ISO 55002:2004, Asset management – Management systems – Guidelines on the application of ISO 55001.
- The Institute of Asset Management, What is Asset Management [online] available from < https://theiam.org/what-asset-management>
- The International Organization for Standardization, Creating value from your assets – a new ISO standard can help [online] available from < http://www.iso.org/iso/home/news_index/news_archive/news.htm?refid=Ref1805>

Developing a Strategic Asset Management System
發展策略性資產管理體系

A summary of the "Strategic Asset Management Approach for Sewage Treatment Facilities in Drainage Services Department", report prepared by Ir Michael Yeung and Ir Gary Chu of Drainage Services Department, and Mr K. Y. Ng of Hong Kong Quality Assurance Agency

撮錄自渠務署楊國輝工程師、朱偉業工程師及香港品質保證局吳國有先生撰寫的「渠務署污水處理設施之策略性資產管理」報告（原文以英語撰寫，中文版由《管略》編輯部翻譯）

DS 渠務署
Drainage Services Department

The Drainage Services Department (DSD) manages a substantial amount of drainage infrastructural assets in Hong Kong. In order to optimise the long term operation and maintenance of these facilities, DSD has developed the Total Asset Management (TAM) system for years, and in 2014 successfully obtained ISO 55001 certification for some of its sewage treatment facilities*.

In this issue VISION summarises a report prepared by DSD in 2013 which outlines the Department's practical experience in developing asset management system for public utilities like their sewage treatment facilities. We believe this article will help readers learn more about the preparations required for establishing such systems.

* Some of DSD's sewage treatment facilities obtained PAS 55 certification in 2013, and then converted to ISO 55001 in 2014. As of 30 June 2014, DSD's ISO 55001-certified sites include Ho Pong Street and Hung Hom Bay Sewage Pumping Stations; Sha Tau Kok, Sai Kung, Sham Tseng and Siu Ho Wan Sewage Treatment Works; Shek O and To Kwa Wan Preliminary Treatment Works; and Main Pumping Station of Stonecutters Island Sewage Treatment Works.

渠務署負責管理香港眾多渠務基建資產。多年來，渠務署致力發展「全面資產管理」體系，以優化渠務設施在長遠營運和保養方面的效益，並於2014年成功為部分污水處理設施取得ISO 55001認證*。

今期《管略》撮錄渠務署於2013年發表的報告，概述渠務署為公用設施（如污水處理設施）在發展資產管理體系時所取得的實際經驗。我們深信本文有助讀者加深了解如何籌備和建立這類體系。

* 渠務署部分污水處理設施於2013年獲PAS 55認證，及後於2014年轉而取得ISO 55001認證。截至2014年6月30日，渠務署獲得ISO 55001認證的地點包括：位於河傍街和紅磡灣的污水泵房；位於沙頭角、西貢、深井和小濠灣的污水處理廠；位於石澳和土瓜灣的基本污水處理廠；以及昂船洲污水處理廠主泵房。

The Electrical and Mechanical (E&M) Branch of DSD is tasked with the responsibility, among other things, to plan, design, construct, operate and maintain sewage treatment facilities. To maintain this large amount of E&M assets, substantial operation and maintenance (O&M) expenses have been incurred. In this respect, an asset management (AM) system is a useful means to achieve not only an optimal life cycle cost in the long run, but also reliable performance to meet the level of services expected from the general public.

In order to enhance the effectiveness of AM, DSD has set out a roadmap leading to the development of a TAM System in E&M Branch of DSD since 2011.

A Task Force chaired by a chief engineer was established in December 2011 with members drawn from all 3 divisions of E&M Branch to oversee the development and implementation of AM with the following 3 main initiatives:
i.   To build up competence in TAM;
ii. To improve the accuracy of asset inventory; and
iii. To develop our first 5-year TAM plan.

Competence in Total Asset Management

In the AM development journey, it is essential to ensure the staff engaged in various activities have an appropriate level of competence in terms of education, training and experience. Various kinds of training activities and duty visits to local and overseas PAS 55-certified utilities were conducted. Selected professional staff also attend overseas AM training courses and conferences. These activities enable DSD staff to learn the best AM practices as well as practical skills and knowledge in establishing TAM system appropriate to DSD.

One of the key successful factors in implementation of TAM system is effective communication. A TAM portal was therefore established in 2012 to share pertinent AM information and knowledge within DSD. All the training materials, duty visit reports, conference synopsis, consultancy reports and TAM Task Force meeting minutes, etc. have been uploaded to the portal for easy access of all. This platform also enables systematic introduction of the AM concept to new staff as they join DSD.

渠務署轄下的機電工程科負責規劃、設計、建造、營運和保養污水處理設施。機電工程科在管理眾多資產時，需要作出一定的營運和保養開支，而資產管理體系不但可長遠而有效地優化管理資產的生命週期成本，同時令污水處理設施表現可靠，以提供符合公眾期望的優質服務。

為提升資產管理績效，自2011年起，渠務署為機電工程科的全面資產管理體系定下發展路線圖。

2011年12月，由一位總工程師領導的工作小組正式成立，成員由機電工程科轄下三個分部組成。工作小組負責監管資產管理體系的發展和推行，主要涉及以下三項工作：
i.   建立全面資產管理的能力；
ii. 提升資產庫存準確度；及
iii. 發展全面資產管理的首個五年計劃

DSD receives the ISO 55001 certificates (from left: Dr Michael Lam, CEO of HKQAA; Mr Tsui Wai, Deputy Director of Drainage Services; Mr Chung Kum Wah, Director of Drainage Services; Ir Dr Hon. Lo Wai Kwok, Chairman of HKQAA)
渠務署獲頒ISO 55001證書（左起：本局總裁林寶興博士；渠務署副署長徐偉先生；渠務署署長鍾錦華先生；本局主席盧偉國議員）

提升全面資產管理的能力

在發展資產管理的過程中，確保參與各項活動的員工在教育、培訓和經驗方面具備合適能力，是非常重要的。我們除了提供不同類型的培訓課程外，亦安排員工到本地及海外取得PAS 55認證的公用事業進行實地考察，以及挑選專業人員出席海外資產管理培訓課程和會議。這些活動讓渠務署員工了解最佳的資產管理運作模式，同時學習實際技巧和知識，以建立一個適合渠務署的全面資產管理體系。

在實施全面資產管理體系時，良好的溝通是成功的關鍵之一。全面資產管理的電子平台在2012年推出，讓渠務署署內人員可以分享相關資產管理的資訊和知識。平台載有培訓資料、實地考察報告、會議提要、顧問報告和全面資產管理工作小組會議紀錄等，方便員工查閱。這個平台更可為渠務署新入職的員工，有系統地介紹資產管理概念。

Asset Inventory

Good TAM system requires meaningful, quality, timely AM information for support. There are two types of computerized maintenance management system (CMMS) in E&M Branch to support this initiative. A good CMMS should embrace a clear identification and definition of asset items that will be managed during the asset life cycle. As such, asset registry and its hierarchy format have been standardized so that assets data can be effectively stored, retrieved and manipulated by the users. All assets are named according to a pre-defined hierarchy which include name of plants, sites/areas, main system names, main and sub-equipment names (Figure 1).

資產庫存

優秀的全面資產管理體系，需要具備有用、具質素和適時的資產管理資料。為此，機電工程科設立了兩類電腦化維修管理系統。出色的電腦化維修管理系統，往往能夠清楚識別及界定在資產生命週期裏需要管理的各樣資產項目。因此，我們把資產登錄檔及其等級制度的格式標準化，方便用戶更有效地把資產數據存檔、檢索和使用。資產均按照既定的等級制度來命名，包括廠房、工地/區域、主要系統名稱、主要及次要設備名稱（見圖一）。

A — Plant 廠房
B — Site / Area 工地 / 區域
C — Area / Main Equipment / System Name 區域 / 主要設備 / 系統名稱
D — Main Equipment / Sub. Equipment 主要設備 / 次要設備
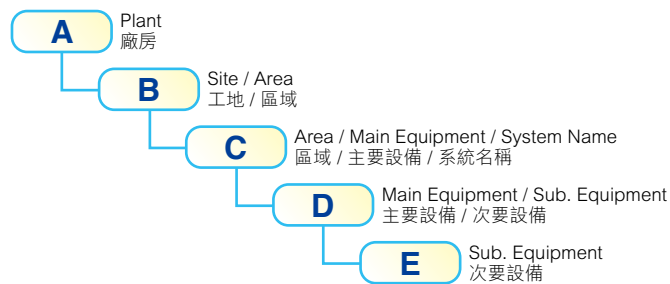E — Sub. Equipment 次要設備

Figure 1: Asset registers and its hierarchy format
圖一：資產登錄檔及其等級制度的格式

The First 5-year TAM Plan

Implementation of TAM system in E&M Branch has been proceeding in stages. A pilot study was first launched in sewage treatment divisions since 2010 and two sewage pumping stations were selected as pilot sites.

This pilot study provided useful insight and solid foundation in establishing an AM system targeted for certification at a later stage. It marked the evolution of strategic TAM system development in three stages, namely:

Stage 1: To establish the scope and objectives of a comprehensive study leading to the development of an AM Improvement Plan (AMIP) at E&M Branch level.

Stage 2: To establish an AM system at each Selected Critical Plant (SCP). The adequacy and effectiveness of the AM system thus established can be determined through pilot implementation for a period of time.

Stage 3: To populate the established AM system from Stage 2 progressively to other sewage treatment facilities in E&M Branch of DSD.

Various stages of TAM system development is illustrated in Figure 2.

全面資產管理的首個五年計劃

機電工程科分階段實施全面資產管理體系。污水處理部於2010年進行首個先導研究計劃，並選出兩個污水泵房作為試點。

此先導研究計劃，為下一階段建立符合認證要求的資產管理體系，奠定穩健的基礎，亦促進策略性全面資產管理體系三個階段的發展：

第一階段： 於機電工程科層面，制訂全面研究的範圍和目標，以發展「資產管理改善計劃」。

第二階段： 於每個選定的重點廠房，建立個別資產管理體系，並於先導計劃實施期間，評定其資產管理體系的適切度和有效性。

第三階段： 將第二階段建立的資產管理體系，逐步推展至渠務署機電工程科的其他污水處理設施。

圖二顯示全面資產管理體系各階段之發展。

Sham Tseng Sewage Treatment Work
深井污水處理廠

To Kwa Wan Preliminary Treatment Works
土瓜灣基本污水處理廠

	Stage 1 Initial Understanding 第一階段 初步了解	Stage 2-1 Pilot Run 第二階段 - 1 試行先導計劃	Stage 2-2 Pilot Implementation 第二階段 - 2 實施先導計劃	Stage 3 Project Extension 第三階段 擴展計劃
Asset Management System 資產管理體系				
	Identify the gaps 識別差距	Establish TAM system 建立全面資產管理體系	Implement / certify TAM 實施全面資產管理體系 / 取得認證	Extend the TAM to other plants 擴展全面資產管理體系至其他廠房
Asset Management Task Force 資產管理工作小組				
	Select critical plants 挑選重點廠房	Set targets and objectives for plant to follow 訂立目標，並予以實行	Monitor the implementation process 監察實施過程	Establish the direction and programme 訂立方向和計劃
Asset Management Team of Selected Sewage Treatment Plants 獲選污水處理廠的資產管理團隊				
	Collect data and site visit 收集數據和進行實地考察	Attend workshop and training 參與工作坊和培訓	Implement and improve the TAM 實施和改善全面資產管理	Implement and improve the TAM 實施和改善全面資產管理

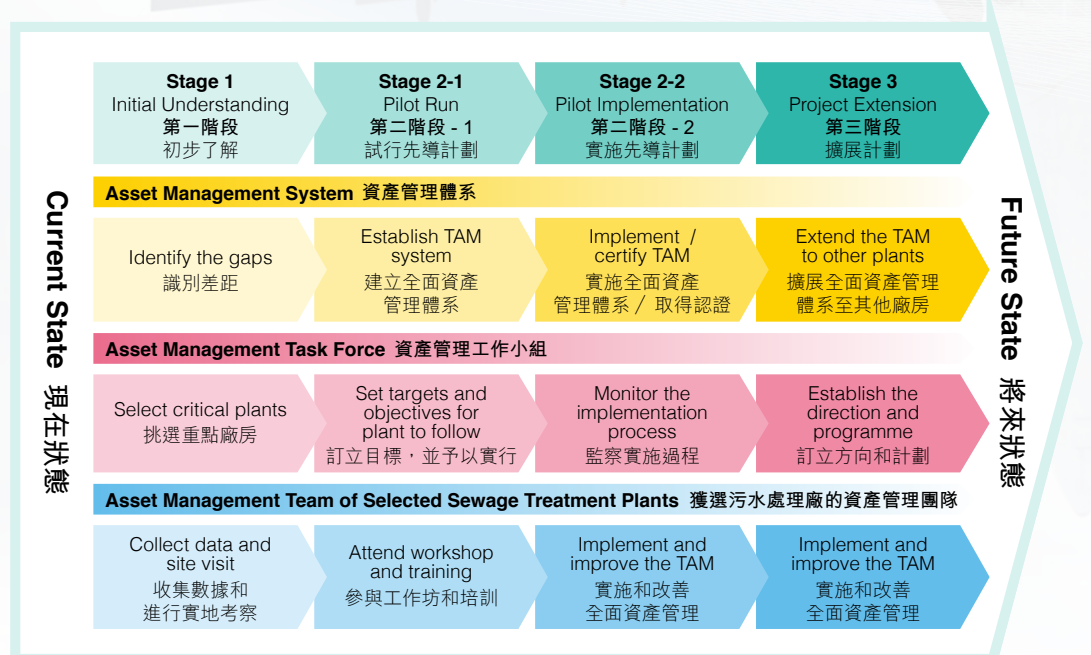Current State 現在狀態 — Future State 將來狀態

Figure 2: Development Stages of TAM System
圖二：全面資產管理體系各階段之發展

The major works at each of these three stages are:

Stage 1 (Oct 2012 – Feb 2013)
The AM practices of the SCPs were holistically reviewed using the assessment tool developed by the Institute of Asset Management to determine the maturity level of current AM practices. An Asset Management Improvement Plan (AMIP) was then established, which summarised the findings from on-site survey, identified the overall strengths and weaknesses, the major gaps which existed and presented a prioritised plan to raise the maturity level of the SCPs in the next 15 months.

Stage 2 (Mar 2013 – May 2014)
The Stage 2 study aimed to materialise all the recommendations in AMIP by launching pilot projects in the SCPs so as to establish AM system eligible for certification. The seven SCPs together with the two pilot sewage pumping stations were identified for implementation of TAM system in Stage 2.

A Total Asset Management Development Plan (TAMDP) which consolidated the findings and practical experience learned from the Stage 2 to identify the major hurdles, overall strengths and weaknesses of the organisation, etc. was prepared. TAMDP presented a prioritised resources plan to raise the overall maturity level of E&M Branch of DSD in compliance with the certification standard in the next 5 years.

Stage 3 (2014 – 2019)
Upon completion of Stage 2 study, the established AM system will have meaningful representation of the major types of sewage treatment facilities in E&M Branch of DSD. The similar AM System can then be populated progressively to other sewage treatment facilities from 2014 to 2019 according to the recommendation from TAMDP.

這三個階段的主要工作如下：

第一階段（2012年10月－2013年2月）
運用資產管理學會的評審工具，對選定重點廠房的資產管理運作進行全面評審，以評定現行資產管理運作模式的成熟程度，繼而制訂「資產管理改善計劃」。此計劃總結實地調查結果，找出整體的優劣之處及其間出現的主要差距，並訂出優先次序計劃，以在隨後15個月內提升選定重點廠房資產管理系統的成熟程度。

第二階段（2013年5月－2014年5月）
第二階段旨在實踐「資產管理改善計劃」中的建議，於選定的重點廠房推出先導計劃，以建立符合認證要求的資產管理體系。此階段會在七個選定的重點廠房和兩所作為試點的污水泵房，實施全面資產管理體系。

隨後再制訂一個「全面資產管理發展計劃」，整合第二階段所得的結果和實際經驗，找出主要困難和機構整體的強、弱項。全面資產管理發展計劃提出了一個優先資源投放計劃，在未來五年內提升渠務署機電工程科的資產管理系統整體成熟程度，以符合認證標準的要求。

第三階段（2014年－2019年）
當完成第二階段時，渠務署機電工程科在主要污水處理設施建立的資產管理體系，將具有一定代表性。按照「全面資產管理發展計劃」的建議，類似的資產管理體系，可於2014年至2019年間，循序漸進推展至其他污水處理設施。

Experience Sharing of Stage 2 Study 第二階段研究所得經驗分享

During Stage 2 of the AM system development, Nominated Plant Representatives (NPRs) consisting of professional engineers and technical staff from various disciplines, were nominated from each SCP to go through the various critical elements of an AM system in the form of facilitation workshops.

This is an important process for gathering and consolidating all the useful and valuable knowledge and experience from the experienced technical staff. And throughout the facilitation, the NPRs focused on a number of elements that would be crucial in establishing an AM system, including the AM Risk Framework, AM Database and AM Plan.

1. Establishment of AM Risk Framework
After defining the boundary of the AM system by compiling to asset registry to contain all the physical assets at each SCP, NPRs were guided to holistically review the criticality of individual equipment, and categorise them into critical or non-critical assets.

The NPR then conducted a risk assessment for all the critical assets which took into consideration of the consequence and impact of the risk events in aspects such as system failure, public confidence, legal and financial issues as well as the likelihood of occurrence of the risk events. A risk assessment matrix was thus developed and used to prioritise the risk level of all the critical assets across their life cycle (Figure 3).

在發展資產管理體系的第二階段時，來自每個選定重點廠房的「委任廠房代表」中包括不同專業界別的工程師和技術人員，會透過技術促進工作坊，檢討資產管理體系的各項重要元素。

這個過程十分重要，因為可搜集及整合資深技術人員的寶貴知識和經驗。過程中，「委任廠房代表」會重點講解建立資產管理體系的重要元素，包括資產管理風險架構、資產管理數據庫和資產管理計劃。

1. 建立資產管理風險架構
為資產管理體系定出範圍，包羅每個選定重點廠房的所有實物資產並收編於資產登錄檔。之後，「委任廠房代表」全面評估個別設備的重要性，把它們分為關鍵或非關鍵資產。

「委任廠房代表」繼而對所有關鍵資產進行風險評估，考慮其引致的後果及影響，例如系統故障、公眾信心危機、法律和財政議題，以及這些危機事故出現的可能性。由此建立的風險評估矩陣，會把重要資產在其生命週期內的風險級別，按優先次序列出（見圖三）。

Risk Assessment Matrix 風險評估矩陣					
Likelihood 可能性	**Consequences 後果**				
	Insignificant 不重要 (1)	Low 輕微 (2)	Moderate 普通 (3)	High 嚴重 (4)	Hazard 災難 (5)
Rare 罕有 (1)	L	L	L	L	M
Unlikely 不大可能 (2)	L	L	M	M	M
Possible 可能 (3)	L	L	M	H	H
Likely 很可能 (4)	L	M	H	H	VH
Often 經常 (5)	L	M	H	VH	VH

Risk Rating 風險評級		Action Required 採取行動
VH	Very High Risk 極高風險	Immediate corrective action 即時改正行動
H	High Risk 高風險	Prioritized action required 優先採取行動
M	Moderate Risk 中等風險	Planned action required 計劃採取行動
L	Low Risk 低風險	Managed by routine procedures 常規程序處理

Figure 3: Risk Assessment Model 圖三：風險評估模型
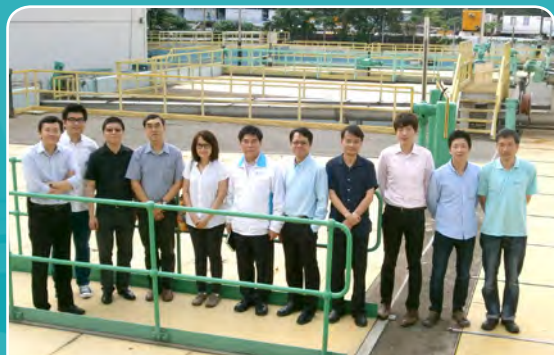
Group photo with certification auditor from Hong Kong Quality Assurance Agency and DSD colleagues from Sewage Treatment Divisions at To Kwa Wan Preliminary Treatment Works
渠務署污水處理部人員與香港品質保證局認證人員於完成認證審核後，在土瓜灣基本污水處理廠合照

For those critical assets at risk, proper risk treatment plans were established to manage the relevant risk events. In addition, past performance and failure data were also retrieved and consolidated for failure causes analysis to derive the corresponding mitigation measures of the overall risk management plan.

This aforementioned review allows NPRs to re-visit holistically their physical assets in terms of the current condition, performance and risk levels in a systematic manner so that maintenance activities for critical assets can be prioritised sensibly. In addition, review on past performance and failure data could help to realise objectively the likelihood and impact of the occurrence of various risk events so that effective monitoring and control measures could be planned proactively.

2. Establishment of AM Database

Having identified the critical assets with moderate risk or above, NPRs took further to review the performance requirements, current asset condition, failure patterns, cause of failures, etc. Based on the historical corrective maintenance records, NPRs tried to correlate the relationship between potential failure events and their pre-failure symptoms.

Having consolidated all the pre-failure symptoms of these critical assets, NPR established a data collection mechanism to capture all the required information in CMMS for on-going monitoring the performance and trend-to-fail of critical assets. With this mechanism in place, potential failure can be minimized by rectification at pre-failure stages. These valuable leading performance indicators can be very helpful tools for prioritising maintenance effort in managing overall performance and risk of critical assets.

3. Establishment of AM Plan

The AM policy was established by DSD's senior management to elaborate the principles, approach and expectations of the AM system. Along with this policy, NPRs have established corresponding AM plan that covered the management strategies and action plans of the critical assets across their life cycle, from acquisition, utilization, maintenance, to disposal. To prepare for the plan, NPRs consolidated the useful asset life cycle information including demand forecast, asset current condition / performance, asset remaining service life, risk level, acquisition cost, utilization and maintenance cost, failure history, etc.

The following AM objectives were then determined based on the desired level of services with due consideration cost, risk and performance:

i. Reduction of corrective maintenance man hours (Cost)
ii. Meeting zero overflow incidents resulting from equipment breakdown (Performance)
iii. Maintaining service availability of selected critical asset to the certain percentage as specified in AM Plan (Risk)

The AM plan also embraced life cycle cost management to communicate funding required to provide the required levels of service and provided an overview of future asset replacement requirements so that replacement alternatives and expenditure smoothing can be planned ahead.

為針對那些有潛在風險的關鍵資產，恰當的風險處理計劃亦已建立，以應對相關危機事故。此外，資產的過往績效和故障數據也透過檢索和整合，以分析故障成因，從而制訂整體風險管理計劃的相應緩解措施。

上述的評審工作促使「委任廠房代表」對實物資產的現時狀況、績效和風險級別，再作全面的系統化檢視，好讓關鍵的保養工作得以優先處理。再者，評審過往績效和故障數據，有助客觀地了解各種危機事故出現的可能性和影響，從而積極計劃有效的監察和調控措施。

2. 建立資產管理數據庫

當找出具中等風險或以上的關鍵資產時，「委任廠房代表」會進一步評審其績效要求、現時資產狀況、故障模式、故障成因等。在參考歷來維修保養的記錄後，「委任廠房代表」會嘗試把潛在故障事件與其故障前的徵兆聯繫起來。

在整合這些關鍵資產故障前的徵兆後，「委任廠房代表」會建立一個數據收集機制，經電腦化維修管理系統搜集一切所需資料，以便持續監察關鍵資產的績效和故障趨勢。設立了這個機制，便可在發生故障前糾正錯誤，將潛在故障事件減至最少。這些寶貴的績效指標，有助定下維修保養工作的優先次序，以便管理關鍵資產的整體績效和風險。

3. 建立資產管理計劃

資產管理方針由渠務署高層管理人員訂立，旨在詳述資產管理體系的原則、方向和期望。與此同時，「委任廠房代表」亦建立了相應的資產管理計劃，當中包含關鍵資產的管理策略和推行計劃，涵蓋從採購、運作、保養至棄置的整個生命週期。為籌備計劃，「委任廠房代表」整合了資產生命週期可用的資料，包括預算需求、資產現時狀況/績效、資產餘下服務年期、風險級別、採購成本、運作和保養費用、過往故障紀錄等。

然後，根據所期望的服務水平，訂下在成本、風險及績效三方面的資產管理目標：

i. 減少修正性維修保養的工作時數（成本）
ii. 設備損壞導致污水溢出的事故數目減至零（績效）
iii. 按資產管理計劃規定，把選定的關鍵資產的服務有效性維持在一定的百分比水平（風險）

資產管理計劃亦包括生命週期的成本管理。除因應所需服務水平預算相應資金外，亦要為未來資產更替的需求作好全面準備，預早計劃好更換選項和開支預算。

Ho Pong Street Sewage Pumping Station
河傍街污水泵房

New Version of ISO 14001 on Schedule for 2015
新版 ISO 14001 預期 2015 年面世

Dr Nigel H. Croft
Associate Technical Director, HKQAA
Chairman, ISO Technical Subcommittee on Quality Systems (ISO/TC176/SC2)
倪國夫博士
香港品質保證局技術總監
國際標準化組織質量體系技術委員會（ISO/TC176/SC2）主席

Since it was first published in 1996, *ISO 14001:2004 Environmental management systems – Requirements with guidance for use* has been adopted on a global basis and there are now well over 250 000 certified users in 155 countries worldwide. The standard is currently undergoing its second revision by ISO's Technical Subcommittee TC207/SC1 to ensure that it remains relevant over the next two decades, by addressing challenges that include:

- Increasingly rigorous legislation
- Environmental concerns arising from pollution; excessive demands on resources; degradation of eco-systems and bio-diversity issues
- An increasing world population, compounded by greater expectations from society for transparent, responsible sustainable development
- Value-chain and life-cycle concepts

The revision process

Work on the revision started in earnest in 2012, and one of the key inputs has been a report from the TC 207/SC 1 Study Group on "Future Challenges for Environmental Management Systems", which evaluated the potential implications of evolving stakeholder expectations and new developments in the field of environmental management since ISO 14001 was first published in 1996. In total, the Study Group tabled 25 recommendations for consideration in the new revision of ISO 14001, including the following:

- Emphasise that an organisation should retain the responsibility to align its ISO 14001 processes with its environmental and business priorities
- Strengthen the focus on subjects such as:
  - Transparency and accountability in environmental management issues and performance
  - Value chain influence and responsibility
- Express environmental management more clearly as contributing to sustainable development, one of the key pillars of social responsibility
- Broaden and clarify the concept of "Prevention of pollution"
- Strengthen performance evaluation as part of ISO 14001
- Emphasise the strategic considerations, benefits and opportunities of environmental management for organisations
- Strengthen (on a strategic level) the relationship between environmental management and the core business of an organisation, i.e. its products and services and the interaction with stakeholders (including clients and suppliers)
- Address life cycle thinking and the value chain perspectives more clearly in the identification and evaluation of environmental aspects related to products and services

The second Committee Draft of the revision has been circulated to the ISO Member Bodies and the ballot was approved in early 2014. Work is currently underway to address the comments received, and to prepare for publication of the Draft International Standard ("DIS"). This is currently scheduled for mid-2014.

《ISO 14001:2004 環境管理體系——要求及使用指南》自1996年出版以來，至今已獲全球155個國家的機構採用，發出超過250,000張證書。現時，國際標準化組織（ISO）技術委員會 TC207/SC1 正密鑼緊鼓地籌備 ISO 14001 的第二次修訂，以應對未來二十年會出現的新挑戰：

- 各地日趨嚴謹的法例法規
- 污染導致的環境問題；天然資源緊絀；生態系統及生物多樣性受損
- 全球人口膨脹；大眾對社會透明度、社會責任及可持續發展的期望日增
- 價值鏈及生命週期概念

修訂過程

ISO 14001 的修訂工作早於 2012 年正式展開，為此，TC207/SC1 的研究小組製作了一份名為《環境管理體系面臨之挑戰》的報告，分析自 1996 年 ISO 14001 初版以來，關於環境管理有甚麼新的發展，以及持份者有甚麼新期望，並從中總結出 25 項新版 ISO 14001 的修訂建議，包括：

- 強調機構有責任將 ISO 14001 融入其環保及業務上的決策
- 更加重視以下題目：
  - 對環境管理事項及表現的透明度和承擔
  - 價值鏈的影響及相關責任
- 在可持續發展的課題上，環境管理項目應獲得更具體的闡述
- 對「防止污染」作出更全面及明確的定義
- 加強表現評估的部分
- 強調環境管理為機構帶來的策略考量、好處及機遇
- 深化環境管理與核心業務（如產品和服務、與顧客及供應商等持份者的互動）在策略層面上的關係
- 在識別及評估產品和服務對環境的影響時，須加入生命週期及價值鏈的思維

新版 ISO 14001 的第二份委員草案已於 2014 年初通過 ISO 成員的投票，現時正根據收集到的意見，編寫《國際標準草案》，預計於 2014 年中發表。

Structure and content of ISO 14001:2015

Like its counterpart for Quality Management Systems (ISO 9001), ISO 14001:2015 will be based on the aligned "High level structure" and "common text" that was developed by ISO's Joint Technical Coordination Group, and published in "Annex SL" of the ISO Directives in 2012. The aim is to promote greater harmonisation between ISO's various management system standards, and this is expected to benefit those users who wish to address quality and environmental topics within a single, integrated system. The result is that approximately 30% of the new ISO 14001 will be virtually identical to the new ISO 9001 (for example, in common topics such as policy definition and deployment, resource management, document control, internal audits and management review), though each standard will include discipline-specific text that reflect the context in which a quality management system or an environmental management system is to be implemented.

The "High Level Clause Structure" to be used for ISO 14001 is as follows:

ISO 14001:2015 的章節結構與內容

跟新版的《ISO 9001 質量管理體系》標準一樣，ISO 14001:2015 將會以 ISO 聯合技術協調小組編寫的「高階架構」及「相同文本」方式編寫，並作為 2012 年《ISO 指引》中的「附件 SL」出版，以便機構能透過實行一個綜合管理體系，同時達到質量管理及環境管理等多個標準。因此，ISO 14001 和 ISO 9001 將會有約三成的相同內容（如政策定義與實施、資源管理、文件管制、內部審核、管理評審等共同題目），雖然兩者均個別有反映其管理體系獨特性的內容。

ISO 14001 的高階架構詳列如下：

1. Scope	**1. 範圍**
2. Normative references	**2. 引用標準**
3. Terms and definitions	**3. 詞彙和定義**
4. Context of the organisation • Understanding the organisation and its context • Needs and expectations of interested parties • Determining the scope of the EMS • Environmental Management System (This will now incorporate the need for the organisation to manage the processes needed for its EMS)	**4. 機構環境** • 了解機構及其環境 • 相關利益團體的需求和期望 • 決定環境管理體系的範圍 • 環境管理體系（包括機構需要管理體系過程的原因）
5. Leadership • Leadership and commitment • Environmental Policy • Roles, responsibility and authority	**5. 領導** • 領導與承擔 • 環境方針 • 職能、職責與權限
6. Planning • Actions to address risks & opportunities (This will include the identification of environmental aspects, any significant impacts and the organisation's legal compliance obligations) • Environmental Objectives and plans to achieve them	**6. 規劃** • 應對風險和機會的措施（包括識別環境管理的範圍、會導致的影響及法律法規要求等） • 目標和計劃實行
7. Support • Resources • Competence • Awareness • Communication (includes internal and external communication and reporting) • Documented information	**7. 支援** • 資源 • 員工能力 • 員工意識 • 溝通（包括內部溝通、對外溝通及匯報等） • 文件記錄
8. Operation • Operational planning and control • Value chain control • Emergency preparedness and response	**8. 營運** • 營運規劃與監控 • 價值鏈的監控 • 緊急情況的準備與應對
9. Performance evaluation • Monitoring, measurement, analysis & evaluation • Internal audit • Management review	**9. 績效評估** • 監察、測量、分析與評估 • 內部審核 • 管理評審
10. Improvement • Non conformity and corrective action • Continual Improvement	**10. 改進** • 不符合項與糾正措施 • 持續改進

It can be seen that this structure follows a logical "Plan-Do-Check-Act" sequence, which is shown schematically in the following figure (taken from the Committee Draft for ISO 14001):

此架構依循「策劃－執行－檢查－行動」的模式，如下圖所示（來源：ISO 14001 委員會草案）：

Context of the organisation 機構環境

Scope of the environmental management system 環境管理體系範圍 (4.3/4.4)

Internal and external issues 內在及外在因素 (4.1)

Needs and expectations of interested parties 相關利益團體的需求和期望 (4.2)

Plan 策劃

Do 執行

Check 檢查

Act 行動

Support and Operation 支援及營運 (7 and 8)

Planning 規劃 (6)

Leadership 領導 (5)

Performance evaluation 績效評估 (9)

Improvement 改進 (10)

Outcomes of the EMS 管理體系成效

Note: Numbers in brackets refer to the clauses in this International Standard.
註：括號內數字為相應的標準條文

The main changes

The Introduction to the Committee Draft of ISO 14001:2015 emphasises that ISO's portfolio of standards on environmental management are intended to provide organisations with knowledge, tools and techniques to build success over the long term and create new opportunities for sustainable development and growth. In today's society, it is important for an organisation to be able to reduce its direct operational footprint, and to influence the way its products and services are designed, manufactured, distributed, consumed and disposed by using a life-cycle perspective to ensure that environmental burdens are not inadvertently shifted elsewhere in the cycle. As social networking and other communication tools become ever more sophisticated, it is equally important that organisations engage with relevant interested parties and share environmental information.

It is important to emphasise that the final text of ISO 14001:2015 has not yet been agreed, but based on the work that has been carried out so far, the following key enhancements can be noted:

- **Context of the organisation**

  All of ISO's management system standards now begin with a requirement for the organisation to define the context in which it operates. In other words: what are the external and internal factors that can affect the organisation's ability to achieve its environmental objectives? External factors could include, for example, the local socio-economic conditions, ecosystem and legal framework, as well as the availability of resources and governmental infrastructure. Internal factors might include issues such as the technology available, organisational culture, and general educational levels of the workforce.

- **Strategic Planning**

  The need to integrate environmental management considerations into the organisation's overall strategic planning processes is emphasised.

- **Risks and opportunities**

  Risk relates to the effect of uncertainty on planned results. The concept of risk has always been present in ISO 14001, in the requirement for an organisation to identify the environmental aspects related to its operations, and to address the associated significant environmental impacts. Many organisations have chosen to address this using techniques such as Failure Mode and Effect Analysis, to assign priorities to the various environmental impacts based on the overall risk they represent. This is now more explicitly addressed, and actions to mitigate adverse risk or exploit beneficial opportunities (such as new technologies, novel use of raw materials etc) are integrated in the operational planning of the environmental management system.

- **Leadership**

  The clause related to top management has been enhanced, to recognise that effective leadership needs to be demonstrated at all levels within the organisation, starting from top management, but being deployed down to the first levels of line management.

- **Environmental Policy**

  The organisation is now required to include in its policy a commitment to the prevention of pollution and to support environmental protection specific to the context of the organisation, such as sustainable resource use, climate change mitigation and adaptation, and protection of biodiversity and ecosystems.

- **External communication and reporting**

  ISO 14001:2015 will emphasise the need communications to be truthful and not misleading; complete, accurate, transparent and reliable, and based on and consistent with the information generated within the environmental management.

- **Value chain planning and control**

  The new revision promotes the concept of "Lifecycle thinking" (but with no specific requirement to perform a formal life cycle assessment) to manage environmental aspects associated with procured goods and services, as well as the environmental impacts associated with product use and end-of-life treatment or disposal.

Transition to ISO 14001:2015

The revision process for ISO 14001 is already well underway, and the new version is on schedule for publication late in 2015. In order to allow sufficient time for organisations that are currently certified to ISO 14001 to adapt to the new requirements, it is likely that a transition period of not less than two years (and, quite probably three years) will be defined by the International Accreditation Forum. This will be decided before the end of 2014.

重要修訂內容

ISO 14001:2015委員會草案的引言指出,ISO環境管理標準系列的目的是為機構提供知識、工具和技術,以達到可持續發展的長遠目標,並創造更多可持續發展的機會。在今日的社會,企業必須懂得降低營運直接產生的碳足跡,並且監控其產品和服務的生命週期,包括開發、生產、分銷、耗用、棄置等過程,以免不自覺地將對環境的影響轉移至其他地方;另外,由於社交網絡及其他溝通平台日益發達,企業亦應爭取不同利益團體的參與,以及與各界分享環保資訊。

現時 ISO 14001:2015 的內容仍在審議階段,但暫時已知以下重要的修訂內容:

- **機構環境**

  現時所有ISO標準均要求機構先定義其營運的環境,換言之:有甚麼內外因素會影響機構達到其環保目標?外在因素可包括社會經濟環境、生態系統情況、法律體制、天然資源供應、政府基建現狀等,而內在因素則可包括科技水平、企業文化、員工教育程度等。

- **策略性規劃**

  強調機構須在整體策略性規劃中納入環境管理的考量。

- **風險及機會**

  風險即影響目標實現的不確定因素。事實上,ISO 14001一直都有包含風險的概念,即要求機構識別其營運對環境有所影響之處,以及如何處理一些重大的影響。過去不少機構選擇使用「失效模式及效應分析」,根據風險程度分配不同影響的處理次序。新版 ISO 14001 則要求機構更明確地處理,在環境管理體系的營運規劃中,加入減低重大風險和尋求更多良好機會(如新科技、使用原材料的新穎方法等)的措施。

- **領導**

  補充了有關最高管理層的條文,確保他們的領導工作遍及機構各階層,並能伸延至最前線的部門。

- **環境方針**

  須在機構方針中承諾防止污染,以及在營運涉及的範圍中支持環保,例如使用可持續的資源、採取氣候變化的紓緩及適應措施、保護生物多樣性和生態系統等。

- **對外溝通及匯報**

  強調溝通內容必須誠實並不含誤導成分、完整、準確、具透明度、可信,並與環境管理的數據互相符合。

- **價值鏈規劃與監控**

  提倡以「生命週期思維」的概念,管理所採用產品和服務對環境的影響,以及處理和棄置產品時的影響(不過並不要求進行正式的生命週期評估)。

ISO 14001:2015的過渡期

ISO 14001 的改版工作進展順利,相信新版本將如期於2015年下旬面世。而為了給予現有 ISO 14001 用戶充足的時間,作好準備迎接新要求,預料國際認可論壇(IAF)會給新修訂版訂立最少兩年(亦很可能是三年)的過渡期,詳情會在 2014 年年底前落實。

TL 9000 Introduces New Security Requirements for ICT
TL 9000為資訊及通訊科技引入新的安全要求

Mr William Wong
Assessment Manager, Manufacturing and Service Business, HKQAA
王偉林先生
香港品質保證局評審經理

TL 9000 is a quality management practice designed by the QuEST Forum in 1998. The Forum was formed in 1998 to pursue the goal of global information and communications technology (ICT) quality and industry-wide performance excellence. The members of QuEST Forum include major ICT service providers and operators as well as major ICT equipment suppliers. TL 9000 was created to focus on supply chain directives throughout the international ICT industry. It is a specialised form of the generic ISO 9001 designed to meet the needs of the ICT sector, extending from service providers and operators to ICT equipment manufacturers, and from component suppliers to services contractors and subcontractors.

TL 9000 requirements are defined in two documents:
• **TL 9000 Requirements Handbook, which includes the full text of ISO 9001:2008**
• **TL 9000 Measurements Handbook**

The R5.5 Requirements Handbook, which replaces the R5.0 handbook, was published on December 31, 2013. This is the latest revision of the TL 9000 standard published by the QuEST Forum and now includes the new ISO 9001:2008 language. The TL 9000 Measurements Handbook remains unchanged at Release 5.0.

The following table summarises the number and types of changes made in the new publication:

Type	Adders (additional requirements to ISO 9001)	Notes (guidance/explanations)
New/changed	13	8
Deleted	2	3
No real change	79	37
TOTAL	**92**	**45**

As reflected in the table, there are not many changes. However, some may have a significant effect on, and far reaching impacts for, an organisation's TL 9000 Quality Management System. The most significant one is the brand new adder – 7.1.C.3 Product Security. According to the new requirement (7.1.C.3 in the R5.5 requirements handbook), a TL 9000 organisation "shall establish and maintain methods for the identification and analysis of security risks and vulnerabilities for the product, throughout its life cycle". Therefore, a consistent mechanism, process or procedure has to be established to identify and analyse the risks and vulnerabilities the products or services may face throughout their life cycle. This will then be consistent with an existing

TL 9000 由 電 訊 業 優 質 供 應 商 領 導 人 論 壇 (QuEST Forum) 於1998年開發，為資訊及通訊科技的國際供應鏈，定立質量管理要求。QuEST Forum也在同一年成立，成員包括全球主要的資訊及通訊科技服務供應商、營運商和設備供應商，旨在推動業界取得卓越表現，致力追求和提升全球資訊及通訊科技的水平。TL 9000以ISO 9001為藍本，制訂了切合行業特性的要求；對象由服務供應商和營運商，擴展至設備生廠商、零部件供應商，以及服務承包商和分包商。

以下兩份文件詳述了TL 9000的要求：
• **《TL 9000要求手冊》，內容包括ISO 9001:2008 全文**
• **《TL 9000測量手冊》**

TL 9000要求手冊5.5版已於2013年12月31日推出，取代了舊有的5.0版。該手冊包含ISO 9001:2008的最新詞彙，是QuEST Forum針對TL 9000標準推出的最新修訂版。而較早時出版的TL 9000測量手冊5.0版，則維持不變。

以下圖表概括了TL 9000要求手冊5.5版和5.0版的變更：

種類	新修訂（ISO 9001 外的附加要求）	附錄 （指引／說明）
全新／改變	13	8
刪除	2	3
沒有太大改變	79	37
整體	**92**	**45**

requirement - 7.1.C.1 Life Cycle Model - which requires a TL 9000 organisation to "establish and maintain an integrated set of methods that covers the life cycle of its products". It also requires that the methods have to contain the processes, activities and tasks involved in the product life cycle, including the concept, definition, development, introduction, production, operation, maintenance and disposal of products. These two requirements together clarify that security risks and vulnerabilities have to be identified and analysed in the processes, activities and tasks involved throughout the whole product life cycle.

The 7.1.C.3 requirement requires that "the results of the risk analysis shall be used to support secure network operation by prevention or mitigation of security vulnerabilities in the product design and operational controls." So a TL 9000 organisation has to apply suitable security risk treatment options to prevent or control the security vulnerabilities identified in the product design and operational controls. The note - 7.1.C.3-NOTE 2 - then elaborates, by referring to ISO 27001: an operational control "is a means of managing risk and it includes policies, procedures, guidelines, practices or organisational structures which can be administrative, technical, management, or legal in nature". The note also gives some examples of the operational controls. This means that an organisation does not only have to have operational controls but also has to control the security risks identified by them.

Lastly, adder 7.1.C.3 requires that "the continuing effectiveness of the design and operational controls shall be assessed throughout the product life cycle". An organisation has to select and use appropriate security measurements to demonstrate that its design and operational controls are effective in terms of preventing and control the security risks.

The newly introduced TL 9000 requirement for product security may have different levels of impact on TL 9000 organisations' quality management systems depending on the maturity level of the security risk management of an organisation. It will certainly improve the awareness and performance of organisations in the ICT supply chain so that they can better protect the interests of customers, end users and interested parties in terms of information security in this "big data" world, in which ICT technology is ever-evolving and ever more critical.

雖然這圖表顯示改變的地方不多，不過某些變動確會對機構的 TL 9000 質量管理體系帶來重要和深遠影響。當中最顯著的改變，是在要求手冊 5.5 版內新加了 7.1.C.3 產品安全要求。根據這全新要求，機構「於整個產品生命週期中，應建立和維持對產品安全風險和漏洞的辨識和分析方案」，並須先定下貫徹的機制、過程或程序，以辨識和分析產品或服務於生命週期中的風險和漏洞。該機制亦應與現時 7.1.C.1 要求的生命週期模型兼容；換言之，機構須「建立和維持一套綜合方案以覆蓋產品的生命週期」，而這方案亦要包含產品生命週期由概念、定義、開發、引進、生產、運作、維護至丟棄處理的相關過程、活動和工作。這兩項要求闡明，由產品概念至丟棄處理的整個產品生命週期所涉及的過程、活動和工作，必須辨識和分析產品的安全風險和漏洞。

此外，7.1.C.3 亦要求「風險分析結果應該用以支援網絡的安全運作，預防或減輕產品設計和營運管制的安全漏洞。」因此，機構必須應用適當的安全風險處理措施，以預防或控制這些漏洞。7.1.C.3 的附錄 2，便根據 ISO 27001 標準解釋營運管制「是管理風險的方法，包括行政、技術、管理或法律層面上的各種政策、程序、指引、做法或組織架構」，並列舉了一些營運管制的例子。總言之，機構不但要具備營運管制能力，亦必須辨識和掌控其安全風險。

最後，7.1.C.3 要求機構必須「於整個產品生命週期裏，評審其設計和營運管制的持續有效性」，並應選擇和運用適當的安全措施，以展示其設計和營運管制能有效地防止和控制安全風險。

TL 9000 新加入的產品安全要求，會因應機構安全風險管理的成熟程度，對其質量管理體系帶來不同程度的影響。儘管如此，新要求無疑有助資訊及通訊科技供應鏈上的機構，提高警覺和改善表現，讓它們在今天日趨重要、瞬息萬變的「大數據世界」裡，更好地保障顧客、用戶和利益相關者的資訊安全。

Management Seminar for Owners and Executives by the Renowned W. Edwards Deming Institute
經營者及行政人員應用「戴明管理法」研討會

HKQAA held a Management Guru Seminar Series - The Deming Management Method for Owners and Executives - from 12 to 14 June. The guest speakers from the W. Edwards Deming Institute were Mr Kelly Allan, the lead facilitator and Deming Institute advisory board member, and Mr John Hunter, senior facilitator.

The event focused on providing hands-on learning for senior executives to enable them to recognise and experience the power of the Deming Management Method and understand what it might mean for them and their organisations. A number of real-world case examples were presented in order to expose senior leaders to a variety of different ways to implement this management principal, developed by the eminent scholar known as the Father of Quality. The speakers addressed various issues in the seminar including:

- Four Key components of Deming-based leadership
- Management's Five Deadly Diseases
- Integrated knowledge of Productivity, Competitiveness and Learning that lead to superior profits
- Deming's Chain Reaction
- Leadership that strengthens the organisation, reduces turnover, and attracts the right suppliers, customers and employees
- Power of PLAN-DO-STUDY-ACT

The seminar received good feedback from participants. They commented that the seminar "provided inspiration, particularly to those who have the authority to define the direction of an organisation and implement a positive system change"; and that "it's a very effective, thought provoking presentation on the challenges we are facing".

Participants proactively formed the first study group dedicated to the Deming Institute in Hong Kong to further study and promote the Deming Management Method in the business community.

本局於 6 月 12 至 14 日舉行「管理達人研討會系列：經營者及行政人員應用『戴明管理法』」研討會，並邀請了來自「戴明學院」的知名講者主講，包括學院首席導師及顧問委員 Mr Kelly Allan，以及高級導師 Mr John Hunter。

「戴明管理法」由被譽為「質量管理之父」的戴明博士創立，此課程旨在為管理人員提供「戴明管理法」的實戰培訓，透過企業實踐個案，學習執行「戴明管理法」的效益和各種方法。研討會上，講者向學員分享了多個管理題目：

- 戴明管理學的四大基石
- 五大管理絕症
- 帶來豐厚利潤的生產力、競爭力和知識
- 戴明「連鎖反應」理論
- 透過領導力增強公司實力、減低流失，以及吸引適合的供應商、顧客和員工
- 「策劃–執行–調查–行動」原則的強大效益

是次研討會獲得學員甚佳的評價，認為「對需主管機構系統優化的管理者甚具啟發性」、「有效刺激學員思考，有助解決公司遇到的難題」。

此外，完成是次研討會後，所有學員更自發地組成了本港首個「戴明學院」的學習小組，繼續於這交流網絡中學習及推廣「戴明管理法」。

Media Sponsors 媒體贊助

Supporting Organisations 支持機構

Quality Building Award (QBA) 2014
建築業盛事「2014年度優質建築大獎」

HKQAA and eight professional organisations from the Hong Kong construction industry jointly organised the Quality Building Award 2014, this year on the theme of "Collaboration for Quality". The QBA is a biennial award which gives public recognition to buildings of outstanding quality that have demonstrated excellent teamwork. It aims to promote a collective commitment by the building industry to maintaining the highest standards of professionalism and competitiveness.

QBA 2014 received overwhelming support and a large number of nominations from each industry. After eighteen months of planning, assessments and judging processes, the results were announced at an award presentation ceremony held on 6 June. The Hon. Mr Leung Chun Ying, GBM, GBS, JP, Chief Executive of HKSAR, was Guest of Honour at the ceremony. Ir C. S. Ho, Deputy Chairman of HKQAA, was also present at the event on behalf of the Agency.

本局聯同本地八大建築專業學會及機構，舉辦「2014年度優質建築大獎」。大獎旨在認同優質的建築項目，並表揚能充分發揮團隊精神的項目隊伍，藉此加強業界競爭力，建立及提升業界形象。

今屆優質建築大獎的主題是「攜手創建優質」，經過十八個月的籌備、評審及甄選過程，頒獎典禮及晚宴已於6月6日舉行，並邀請了香港特區行政長官梁振英先生，大紫荊勳賢，GBS，太平紳士，擔任主禮嘉賓。本局副主席何志誠工程師亦代表本局出席是次典禮。

Chairman Visits HKQAA Shanghai Office
主席到訪上海辦公室

HKQAA's Chairman, Ir Dr Hon. Lo Wai Kwok; Deputy Chairman, Ir C. S. Ho; and Governing Council member, Mr Ronald Y. F. Lau, visited our Shanghai office on 30 June. During the visit, they learned more about the business of the Agency in the Yangtze River Delta and talked with staff about the future direction for the Agency.

Since entering the mainland China, HKQAA has been dedicated to assisting enterprises in the region to develop good management practices by introducing visionary management concepts, sharing knowledge and transferring management technology. With its extensive knowledge and experience in the industry, our mainland team will continue to provide clients with professional conformity assessment services.

本局主席盧偉國議員博士工程師、副主席何志誠工程師及董事局成員劉耀輝先生，於6月30日到訪公司的上海辦公室，了解本局在長三角地區的業務情況，並向員工闡述對本局國內業務發展的期望。

本局多年來一直致力為內地企業引入前瞻性的管理理念，透過知識傳遞和技術轉移，協助企業樹立良好的管理規範。相信本局具備豐富行業知識和經驗的內地團隊，定當努力不懈，繼續為業界提供專業的合格評定服務。

International
國際

New ISO 45001 standard for Health & Safety Management begins to take shape

ISO's Project Committee PC 283 has already held two meetings to work on the ISO 45001 standard, and the first Committee Draft is scheduled for distribution to ISO member bodies in July 2014.

ISO 45001, scheduled for publication in 2016, is expected to replace the current OHSAS 18001, which is widely used for certification, but is not an official ISO publication. ISO 45001 will also follow the High Level Clause Structure and contain many requirements that are identical to those contained in the future ISO 9001 and ISO 14001 standards, thereby further facilitating the implementation of integrated systems for those organisations that choose to do so.

健康及安全新標準ISO 45001草案即將完成

國際標準化組織（ISO）工作小組 PC 283 已為 ISO 45001 的制訂工作舉行兩次會議，並計劃於 2014 年 7 月向各 ISO 成員發布首份委員會草案。

ISO 45001 預期於 2016 年出版，並會取代現時十分普及，但並非正式 ISO 標準的 OHSAS 18001。ISO 45001 將會以「高階架構」方式編寫，而當中不少要求亦會與新修訂版的 ISO 9001 和 ISO 14001 標準相同，讓機構能更容易實行綜合管理體系。

迎新天地 Welcome on Board

New Certified Clients
新認證客戶

February to April 2014
2014年2月至4月

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 organisational and business goals since 1989.

From February to April 2014, we have been pleased to welcome 17 organisations to our community. Among them, they have obtained 20 certificates of ISO 9001, ISO 14001, OHSAS 18001, ISO 20000, ISO 22000, ISO 50001, BFA MS, QSPSC, SA8000 and WSMS-FINE-2013. We believe the new members will contribute to the overall success of the brand that adds values to stakeholders.

香港品質保證局自 1989 年成立以來，致力協助工商界實施管理體系，有效地達至機構和營商目標。

由 2014 年 2 月至 4 月期間，香港品質保證局共頒發 20 張證書，包括 ISO 9001、ISO 14001、OHSAS 18001、ISO 20000、ISO 22000、ISO 50001、BFA MS、QSPSC、SA8000、WSMS-FINE-2013。在此謹祝賀 17 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持份者帶來更大的裨益。
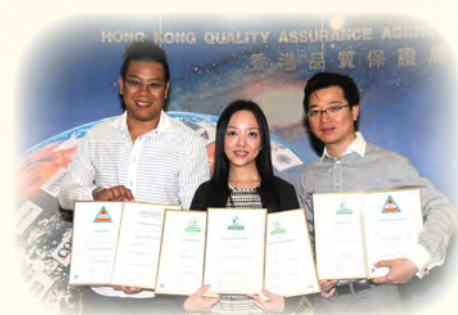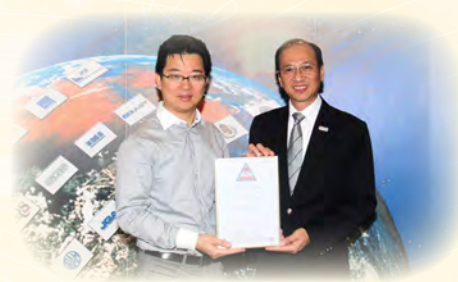
Mainland China 中国内地　　　　Aug to Nov 2014　2014 年 8 月至 11 月

Course Title 课程名称		Duration (Day) 课程长度（天）	Fee (per head) RMB 收费 (每人) 人民币	Aug 八月	Sep 九月	Oct 十月	Nov 十一月
Quality 质量							
ISO 9001:2008 Quality Management Systems - Understanding & Application ISO 9001:2008 质量管理体系－理解与应用	P	1	RMB 600	VM1P/GZ-08A **GZ** 27 VM1P/SH-08A **SH** 20	VM1P/SH-09A **SH** 10	VM1P/GZ-10A **GZ** 15	VM1P/SH-11A **SH** 05
ISO 9001:2008 Quality Management Systems - Internal QMS Auditor Training ISO 9001:2008 质量管理体系－内部质量管理体系审核员培训	P	2	RMB 1,200	VM3P/GZ-08A **GZ** 28-29 VM3P/SH-08A **SH** 21-22	VM3P/SH-09A **SH** 11-12	VM3P/GZ-10A **GZ** 16-17	VM3P/SH-11A **SH** 06-07
The Must-know Essentials for Quality System Management Representative 质量管理体系 - 管理者代表的重要须知	P	1	RMB 980		MT23P/GZ-09A **GZ** 10		
ISO 9001:2008I Quality Management Systems Documentation Training ISO 9001:2008 量管理体系文件课程	P	1	RMB 780			QMS4P/GZ-10A **SH** 06	
Environment 环境							
ISO 14001:2004 Environmental Management Systems – Understanding & Application ISO 14001:2004 环境管理体系－理解与应用	P	1	RMB 600	EMS2P/SH-08A **SH** 20	EMS2P/GZ-09A **GZ** 24 EMS2P/SH-09A **SH** 17		EMS2P/GZ-11A **GZ** 10 EMS2P/SH-11A **SH** 12
ISO 14001:2004 Environmental Management Systems – Internal EMS Auditor Training ISO 14001:2004 环境管理体系－内部环境管理体系审核员培训	P	2	RMB 1,200		EMS3P/GZ-09A **GZ** 25-26 EMS3P/SH-09A **SH** 18-19		EMS3P/GZ-11A **GZ** 11-12 EMS3P/SH-11A **SH** 13-14
IECQ HSPM QC080000 - Internal Auditor Training IECQ HSPM QC080000 - 内部审核员培训	P	2	RMB 1,500	IE01P/SH-08A **SH** 07-08	IE01P/GZ-09A **GZ** 04-05		
Occupational Health and Safety 职业健康和安全							
OHSAS 18001:2007 Occupational Health and Safely Management Systems – Understanding & Application OHSAS 18001:2007 职业健康和安全管理体系－理解与应用	P	1	RMB 600	OHS8P/GZ-08A **GZ** 28 OHS8P/SH-08A **SH** 20		OHS8P/SH-10A **SH** 08	OHS8P/GZ-11A **GZ** 18 OHS8P/SH-11A **SH** 17
OHSAS 18001:2007 Occupational Health and Safely Management Systems – Internal OHS Auditor Training OHSAS 18001:2007 职业健康和安全管理体系－内部职业健康和安全管理体系审核员培训	P	2	RMB 1,200	OHS9P/GZ-08A **GZ** 29-30 OHS9P/SH-08A **SH** 21-22		OHS9P/SH-10A **SH** 09-10	OHS9P/GZ-11A **GZ** 19-20 OHS9P/SH-11A **SH** 18-19
Social Accountability 社会责任							
SA8000:2008 Social Accountability Management Systems - Internal Auditor Training SA8000:2008 社会责任管理体系－内部审核员培训	P	2	RMB 1,800		SA01P/SH-09A **SH** 03-04	SA01P/GZ-10A **GZ** 23-24 SA01P/SH-10A **SH** 15-16	
An in-depth Understanding of ISO26000 – What Does Social Responsibility Mean to Your Organization? 深入剖析 ISO26000 － 社会责任对机构的意义	P	1	RMB 2,500	SP03P/GZ-08A **GZ** 14	SP03P/GZ-09A **GZ** 09		
BSCI (Business Social Compliance Initiative) Understanding Training BSCI 倡议商界遵守社会责任之条文解	P	1	RMB 780		BS02P/SH-09A **SH** 29	BS02P/GZ-10A **GZ** 29	
Management Tools and Skills 管理工具和技能							
The 5 Core Tools - APQP/PPAP/MSA/FMEA/SPC 五大核心工具（APQP/PPAP/MSA/FMEA/SPC）	P	5	RMB 4,800				MS01P/GZ-11A **GZ** 24-28
Establishing Safety Culture in Your Enterprise 企业安全文化建设	P	2	RMB 3,500		GM01P/GZ-09A **GZ** 29-30		
Telecommunications and Information Service 电讯和资讯服务							
Understanding the Essence of TL 9000 Requirements Handbook R5.5 TL 9000 R5.5 质量管理体系要求手册改版精要	P	1	RMB 1,300	TL03P/GZ-08A **GZ** 08	TL03P/GZ-09A **GZ** 12 TL03P/SH-09A **SH** 16	TL03P/SH-10A **SH** 21	TL03P/SH-11A **SH** 25
Understanding the Essence of TL 9000 Measurements Handbook R5.0 TL 9000 R5.0 质量管理体系测量手册改版精要	P	1	RMB 1,300		TL05P/SH-09A **SH** 23		TL05P/SH-11A **SH** 24
TL 9000 R5.5/R5.0 Quality Managerment Systems - Internal Auditor Training TL 9000 R5.5/R5.0 质量管理体系－内部审核员培训	P	3	RMB 3,800	TL04P/SH-08A **SH** 13-15	TL04P/SH-09A **SH** 24-26	TL04P/GZ-10A **GZ** 20-22 TL04P/SH-10A **SH** 22-24	TL04P/SH-11A **SH** 26-28
TL 9000 R5.0/R5.0 Quality Managerment Systems - Auditing TL 9000 R5.0/R5.0 质量管理体系审核课程（QuEST 论坛认可课程）	P	3	RMB 9,600				TL02P/GZ-11A **GZ** 05-07
Environmental, Health and Safety Management 環境、職業健康安全管理							
Practical Occupational Health and Safety Management 职业健康安全管理实务	P	2	RMB 1,800			OH13P/GZ-10A **GZ** 13-14	
On-site First Aid Course 企业 EHS 现场急救课程	P	1	RMB 900	EH09P/GZ-08A **GZ** 22		EH09P/GZ-10A **GZ** 21	
Integrated Management Systems 综合管理系列课程							
Integrated Management Systems (ISO 9001 / ISO 14001 / OHSAS 18001) - Internal Auditor Training 综合管理体系 IMS（ISO9001/ISO14001/OHSAS18001）内审员培训	P	4	RMB 3,500			IMS4P/GZ-10A **GZ** 07-10	
Indentification of EHS Factors and Risk Assessment EHS 因素识别与风险评价	P	2	RMB 1,800			EH01P/GZ-10A **GZ** 09-10	

C Conducted in Cantonese 以廣東話授課　**E** Conducted in English 以英語授課　**P** Conducted in Putonghua 以普通話授課　**GZ** Guangzhou 廣州　**SH** Shanghai 上海　**MU** Macau 澳門

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

Hong Kong 香港 — Aug to Oct 2014　2014 年 8 月至 11 月

Course Title 課程名稱		Duration (Day) 課程長度 (天)	Fee (per head) HKD 收費(每人)港幣	Aug 八月	Sep 九月	Oct 十月	Nov 十一月
Quality and Integrated Management Systems 質量和綜合管理							
ISO 9001:2008 Quality Management Systems - Introduction / ISO 9001:2008 質量管理體系－入門	C	9:00am-12:00 noon Half-day	HKD 200		QMS1C/HK-09A 01		QMS1C/HK-11A 03
ISO 9001:2008 Quality Management Systems - Understanding & Application / ISO 9001:2008 質量管理體系－理解及應用	C	1	HKD 1,500	VM1C/HK-08A 04	VM1C/HK-09A 03	VM1C/HK-10A 06	VM1C/HK-11A 07
ISO 9001:2008 Quality Management Systems - Internal QMS Auditor Training / ISO 9001:2008 質量管理體系－內審核員培訓	C	2	HKD 3,200	VM3C/HK-08A 14-15	VM3C/HK-09A 15-16	VM3C/HK-10A 30-31	VM3C/HK-11A 13-14
ISO 9001:2008 Quality Management Systems Documentation / ISO 9001:2008 質量管理體系文件	C	1	HKD 1,600/ HKD 1,500*			QMS4C/HK-10A 08	
The Must-know Essentials for Quality System Management Representative / 質量管理體系－管理者代表重要須知	C	1	HKD 1,600/ HKD 1,500*	MT23C/HK-08A 06		MT23C/HK-10A 22	
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	C	2	HKD 3,500/ HKD 3,300*	QMS5C/HK-08A 11-12			
Integrated Management Systems Set Up & Audit Approach / 綜合管理體系－建立及審核方法	C	2	HKD 3,500/ HKD 3,300*	IMS2C/HK-08A 25-26			
ISO 9001:2008 Quality Management Systems - Auditor/Lead Auditor Training Course / ISO 9001:2008 質量管理體系－主任審核員證書培訓課程	E	5	HKD 11,000/ HKD 10,500*			QMS/IRCA/10 13-17	
Environmental Conservation 環境保育							
ISO 14001:2004 Environmental Management Systems - Understanding & Application / ISO 14001:2004 環境管理體系－理解與應用	C	1	HKD 1,600/ HKD 1,500*		EMS2C/HK-09A 04		EMS2C/HK-11A 04
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	C	2	HKD 3,200/ HKD 3,000*	EMS3C/HK-08A 20-21		EMS3C/HK-10A 20-21	
ISO 14001:2004 Environmental Management Systems - Implementation and Documentation / ISO 14001:2004 環境管理體系－實施及文件指引	C	1	HKD 1,600/ HKD 1,500*		EMS8C/HK-09A 29		
ISO 14001:2004 Environmental Management Systems Auditor / Lead Auditor Training / ISO 14001:2008 環境管理體系－主任審核員證書培訓課程	E	5	HKD 11,000/ HKD 10,500*				EM01E/HK-11A 24-28
ISO 50001:2011 Energy Management Systems - Internal Auditor Training / ISO 50001:2011 能源管理體系－內部審核員培訓	C	2	HKD 3,500/ HKD 3,300*			EM08C/HK-10A 23-24	
NEW 最新課程 GreenHouse Gas Verifier Training / 溫室氣體驗證員	C	2	HKD 3,500/ HKD 3,300*			EM09C/HK-10A 27-28	
Occupational Health and Safety Management 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	C	1	HKD 1,600/ HKD 1,500*	OHS8C/HK-08A 18			OHS8C/HK-11A 06
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－內部審核員培訓	C	2	HKD 3,200/ HKD 3,000*		OHS9C/HK-09A 18-19		OHS9C/HK-09A 24-25
OHSAS 18001 Occupational Health and Safety Management Systems Auditor / Lead Auditor Training Course / OHSAS 18001:2007 職業健康和安全管理體系－主任審核員證書培訓課程	E	5	HKD 11,000/ HKD 10,500*				OH06E/HK-11A 17-21
Hygiene, Food Safety & Wine Storage 衛生、食品安全及酒貯存							
Implementing HACCP for Food Businesses Programme / 實踐食物安全重點控制課程	C	2	HKD 3,500/ HKD 3,200*	HA10C/HK-08A 28-29			
ISO 22000:2005 Food Safety Management Systems - Understanding and Application / ISO 22000:2005 食品安全管理體系－理解與應用	C	1	HKD 1,600/ HKD 1,500*		HA5C/HK-09A 12		
ISO 22000:2005 Food Safety Management Systems - Internal FSMS Auditor Training / ISO 22000:2005 食品安全管理體系－內部審核員課程	C	2	HKD 3,500/ HKD 3,300*			HA7C/HK-10A 21-22	
ISO 22000:2005 Food Safety Management Systems Auditor/Lead Auditor Course / ISO 22000:2005 食品安全管理體系－主任審核員證書培訓課程	E	5	HKD 11,000/ HKD 10,500*			FSMS/IRCA/10 06-10	
NEW 最新課程 Application of 7S to Food Manufacturing and Catering / 七常法應用於食品的製造和餐飲服務	C	1	HKD 1,600	GP06C/HK-08A 20			
Foundation of HKQAA Wine Storage Management Systems Specifications / 建立優良存酒設備－基礎	C	2:00pm-6:00pm Half-day	HKD 900/ HKD 820*		QM04C/HK-09A 01		QM04C/HK-11A 03
Management Tools, Skill for Improvement 管理工具和技巧							
Implementation of HKQAA 5S in the Workplace Operation / 實施HKQAA 5S在工作間的營運	C	1	HKD 1,600	GP03C/HK-08A 05			
NEW 最新課程 Mediation: A Win-Win Approach to Settle Labour Disputes / 調解勞工糾紛達至雙贏	C	1	HKD 1,900		EW50C/HK-09A 11		
NEW 最新課程 Dancing with the Media / 與傳媒共舞	C	1	HKD 2,400/ HKD 1,900*	EW47C/HK-08A 27			
NEW 最新課程 Get New Customers Through Low-Cost Search Engine Marketing / 妙用搜索引擎開拓新客源	C	1	HKD 2,100/ HKD 1,900*		MT66C/HK-09A 05		
NEW 最新課程 管理者必備的風範	C	2:30pm-5:30pm Half-day	HKD 1,500				S173C/HK-11A 12
Business Continuity Management, Risk and Crises Management 營運持續管理體系、風險及危機管理							
NEW 最新課程 ISO 22301 Business Continuity Management Systems - Understanding & Application / ISO 22301 營運持續管理體系－理解及應用	C	1	HKD 1,600		RM01C/HK-09A 30		
NEW 最新課程 ISO 22301 Business Continuity Management Systems - Internal Auditor Training / ISO 22301 營運持續管理體系－內部審核員課程	C	2	HKD 3,700/ HKD 3,500*			RM02C/HK-10A 30-31	
NEW 最新課程 Business Continuity Planning and Management / 營運持續計劃及管理	C	3	HKD 6,000/ HKD 5,800*	RM03C/HK-08A 13, 15 & 18			
NEW 最新課程 Business Continuity Management System (BCMS) Auditor / Lead Auditor Conversion Training Course / 營運持續管理體系－主任審核員轉證培訓課程	C	3	HKD 9,500/ HKD 9,000*		RM08C/HK-09A 17-19		
NEW 最新課程 Psychological Support for Crises Situations / 應對災難情緒支援	C	1	HKD 2,100/ HKD 1,900*			RM05C/HK-10A 15	
NEW 最新課程 Strategic Crises Management Workshop / 策略危機管理工作坊	C	1	HKD 4,000/ HKD 3,600*		RM06C/HK-09A 23		
NEW 最新課程 Media Management in Crisis Communications / 危機中的傳媒管理	C	1	HKD 2,400/ HKD 1,900*				RM07C/HK-11A 17

Hong Kong 香港

Aug to Nov 2014 2014 年 8 月至 11 月

Course Title 課程名稱		Duration (Day) 課程長度（天）	Fee (per head) HKD 收費（每人）港幣	Course Code & Date 課程編號及日期			
				Aug 八月	Sep 九月	Oct 十月	Nov 十一月
Customer Service: From Good To Great 顧客服務：邁向優越							
ISO 10002:2004 Customer Satisfaction - Guidelines for Complaints Handling - Understanding & Application ISO 10002:2004 客戶滿意度 — 投訴處理指引 — 理解與應用	C	1	HKD 1,600/ HKD 1,500*		MT14C/HK-09A **11**		
Effective Servicing & Selling Skills On Phone 優質電話營銷及顧客服務	C	1	HKD 1,900	EW51C/HK-08A **08**			
Corporate Social Responsibility 企業社會責任							
How to Prepare Corporate Sustainability Report? 如何撰寫企業持續發展報告	C	1	HKD 1,600				SR01C/HK-11A **10**
Telecommunications, Information Security and Management 電信、資訊保安與管理							
ISO/IEC20000 IT Service Management Auditor Course ISO/IEC20000 信息技術服務管理審核員培訓	C	2	HKD 6,200/ HKD 5,800*	IS03C/HK-08A **11-12**			
ISO 27001:2013 Information Security Management Systems - Understanding & Application ISO 27001:2013 信息安全管理體系 — 理解與應用	C	1	HKD 1,600/ HKD 1,500*		ISE3C/HK-09A **22**		
ISO 27001:2013 Information Security Management Systems - Internal Auditor Training ISO 27001:2013 信息安全管理體系 — 內部審核員課程	C	2	HKD 3,200/ HKD 3,000*			ISE7C/HK-10A **23-24**	
Implementation of ISO 27001:2013 Information Security Management Systems 實踐 ISO 27001 信息安全管理體系	C	3	HKD 5,100/ HKD 4,800*		ISE5C/HK-09A **02-04**		

Remarks 備註

* Please refer the early bird payment deadine to our website 請於本局網頁參看優先報名之付款詳情

The course schedule is subject to change. Please refer to the most updated schedule in our web-site 課程內容或會略為改動，最新詳情請參看本局網頁

Organisations contracted HKQAA as their management system certification service providers have no obligation to enroll in any HKQAA training services
聘用本局管理體系認證服務的機構並無義務參加本局所舉辦的培訓課程

For enquires, please contact our Training Service Unit at Tel : 2202 9111   Our web-site : http ://training.hkqaa.org   Email : training@hkqaa.org

Last Updated Date : 8 July 2014

GRI's Introductory Workshop on Sustainability Reporting

Open in 4th quarter of 2014

The Global Reporting Initiative (GRI) is a non-profit organization that works towards a sustainable global economy by providing sustainability reporting guidance.

Global Reporting Initiative™
Focal Point China

Speakers

Timothy Hui   Director, GRI Greater China

Elyse Chen   China Specialist, GRI China Focal Point

Programme

Introduction: GRI and G4 Guidelines

Sustainability Reporting Process and Challenges at Each Phase

Group Exercise 1) Identify Key Stakeholders

Group Exercise 2) Apply the GRI Materiality Test

G4 Materiality Matters Check Introduction

Panel Discussion & Networking
Guests of companies that have been producing their own GRI reports will be invited as Panelists

Enquiry & Registration

Mr Anson Wong   Tel: 2202 9395 / 2202 9111
Email: anson.wong@hkqaa.org
Website: http://training.hkqaa.org

HKQAA
HONG KONG QUALITY ASSURANCE AGENCY
香港品質保證局

CARBON DISCLOSURE
Making Your Contribution to Sustainability

碳披露
為可持續發展作出貢獻

💡 Highlights 研討會內容

- **Findings of researches on carbon management performance**
  香港機構的碳管理表現調查分析
  - HKQAA-HKJC Carbon Disclosure e-Platform (CDeP) —
    Carbon Performance Questionnaire results in 2013
    「HKQAA-HKJC碳披露電子平台」──2013年碳表現問卷調查結果
  - Hang Seng Corporate Sustainability Indexes research and rating
    「恒生可持續發展企業指數系列」調查及評級

- **Kick off HKQAA-HKJC carbon research and disclosure project 2014**
  2014年HKQAA-HKJC碳表現調查及披露計劃啟動

- **Overview of common carbon quantification methods**
  簡介機構常用的碳量計算方式
  - ISO 14064 series of international standard for GHG management activities
    ISO 14064溫室氣體管理國際標準系列
  - Clean Development Mechanism (CDM) methodologies
    清潔發展機制計算辦法
  - ISO/TS 14067:2013 Greenhouse gases — Carbon footprint of products —
    Requirements and guidelines for quantification and communication
    ISO/TS 14067:2013產品碳足跡量化和溝通的要求和指導

💡 Speaker　講者

Ms Connie Sham	Head of Audit, Strategic Business, HKQAA	
沈小茵小姐	香港品質保證局策略業務審核主管	
Mr WK Wong	Manager, Carbon and Energy, HKQAA	
黃偉國先生	香港品質保證局經理（碳和能源）	

Free of charge 費用全免

💡 **Date　日期** 21 / 8 / 2014 (Thu)

💡 **Time　時間** 3:00 pm - 5:00 pm

💡 **Venue　地點** Scope Lecture room, UR8, 8/F, United Centre, Admiralty
金鐘統一中心8樓香港城市大學專業進修學院UR8演講室

💡 **Language 語言** Cantonese 廣東話

💡 Enrolment & Enquiries　報名及查詢

Contact Person 聯絡人　Mr Kent Wong 王先生
Tel 電話　(852) 2202 9360 (Direct 直線)　|　(852) 2202 9111 (General 總機)
E-mail 電郵　kent.wong@hkqaa.org

HKQAA HONG KONG QUALITY ASSURANCE AGENCY
香港品質保證局

HKQAA-HKJC Carbon Disclosure e-Platform (CDeP)
HKQAA-HKJC 碳披露電子平台
http://cdep.hkqaa.org/

香港賽馬會
The Hong Kong Jockey Club

Hong Kong 香港
☎: (852) 2202 9111
🖷: (852) 2202 9222
✉: hkqaa@hkqaa.org

Shanghai 上海
☎: (86 21) 6876 9911
🖷: (86 21) 6876 9922
✉: info.sh@hkqaa.org

Guangzhou 廣州
☎: (86 20) 8383 3777
🖷: (86 20) 8382 3066
✉: info.gz@hkqaa.org