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Quality Management

1. Introduction

Customers today are becoming more sophisticated, better informed and their expectations are high. Hence, for a business to survive and prosper, it has to offer a commitment to quality.

2. What is Quality Management?

Quality is a degree of excellence – the extent to which something is fit for its purpose. Product or service quality is also defined as “conformance with requirement, freedom from defects or contamination or simply a degree of customer satisfaction”.

Therefore, quality management is the totality of characteristics of a product or service that bears on its ability to satisfy stated and implied needs. Quality management is an organisation-wide approach to understanding what their customers need and consistently delivering accurate solutions within budget and on time.

3. Why Quality Management?

The existence of each business is not only to make a profit, but to also create and retain satisfied customers. A business would have no profits if it failed to create and retain satisfied customers. Providing products and services which meet customer needs and expectations creates satisfied customers. Anticipating future needs and expectations retains satisfied customers. Therefore, quality is vital to the survival of every business.

4. How can Quality be Achieved?

The only true measure of acceptable quality is customer satisfaction. When customers are satisfied with the products and services offered, it proves that the organisation has not only correctly interpreted customer needs and expectations, but is also providing products and services of acceptable quality.

However, organisations need to be aware of customer needs and expectations which are constantly changing. The increasing awareness of new technology, legislation, computer products or services creates “new wants” for customers. Hence, it is crucial for organisations to constantly improve quality of their products or services to ensure satisfied customers are retained as well as created.

Several methods have evolved to achieve, sustain and improve quality. They are known as quality control, quality improvement and quality assurance - collectively known as quality management. Quality management is not the preserve of one manager but of all managers. Quality is achieved through a chain of processes, each of which has to be under control and subject to continual improvement.

The chain starts with top management expressing a firm commitment to quality, followed by:

- establishing customer needs and expectations
- developing and maintaining a management system that will enable achievement of customer needs and expectations - reliably, repeatedly and economically
- designing products and services with features which reflect customer needs
- building products and services so as to reproduce faithfully the design
- verifying before delivery, ensuring that products and services possess the features required
- preventing the supply of products and services that possess features which dissatisfy customers
- discovering and eliminating undesirable features in products and services

- finding less expensive solutions to customer needs
- making operations more efficient and effective
- discovering what will delight customers and providing it
- most importantly, honouring commitments

A variety of standards, philosophies, methodologies, tools, techniques and measures have been developed to help organisations meet these goals:

- Management systems - ISO 9001, ISO 14001, BS OHSAS 18001, ISO/IEC 27001
- Philosophies - total quality management
- Methodologies - business process management, continual improvement
- Tools and techniques - process charts, failure mode and effects analysis, statistical process control, quality function deployment
- Measures - quality awards, best value, ISO 9000

5. Quality Management Principles

Quality management adopts a number of management principles that can be used by top management to guide their organisations towards improved performance.

Principle 1: Customer Focus

Organisations depend on their customers and hence should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations.

Key Benefits:

- Increased revenue and market share obtained through flexible and fast responses to market opportunities.
- Increased effectiveness in the use of organisation's resources to enhance customer satisfaction.
- Improved customer loyalty leading to repeat

business.

Applying the principle of customer focus typically leads to:

- Researching and understanding customer needs and expectations.
- Ensuring that the objectives of the organisation are linked to customer needs and expectations.
- Communicating customer needs and expectations throughout the organisation.
- Measuring customer satisfaction and acting on the results.
- Systematically managing customer relationships.
- Ensuring a balanced approach between satisfying customers and other interested parties.

Principle 2: Leadership

Leaders establish unity of purpose and direction of the organisation. They should create and maintain the internal environment in which people can become fully involved in achieving the organisation's objectives.

Key Benefits:

- People will understand and be motivated towards the organisation's goals and objectives.
- Activities are evaluated, aligned and implemented in a unified way.
- Miscommunication between levels of an organisation will be minimised.

Applying the principle of leadership typically leads to:

- Considering the needs of all interested parties including customers, owners, employees, suppliers, financiers, local communities and society as a whole.
- Establishing a clear vision of the organisation's future.
- Setting challenging goals and targets.
- Creating and sustaining shared values, fairness and ethical role models at all levels of the organisation.
- Establishing trust and eliminating fear.
- Providing people with the required resources, training and freedom to act with responsibility and accountability.
- Inspiring, encouraging and recognising people's contributions.

Principle 3: Involvement of People

People at all levels are the essence of an organisation and their full involvement enables their abilities to be used for the organisation's benefit.

Key Benefits:

- Motivated, committed and involved people within the organisation.
- Innovation and creativity in furthering the organisation's objectives.
- People being accountable for their own performance.
- People eager to participate in and contribute to continual improvement.

Applying the principle of involvement of people typically leads to:

- People understanding the importance of their contribution and role in the organisation.
- People identifying constraints to their performance.
- People accepting ownership of problems and their responsibility for solving them.
- People evaluating their performance against their personal goals and objectives.
- People actively seeking opportunities to enhance their competence, knowledge and experience.
- People freely sharing knowledge and experience.
- People openly discussing problems and issues.

Principle 4: Process Approach

A desired result is achieved more efficiently when activities and related resources are managed as a process.

Key Benefits:

- Lower costs and shorter cycle times through effective use of resources.
- Improved, consistent and predictable results.
- Focussed and prioritised improvement opportunities.

Applying the principle of process approach typically leads to:

- Systematically defining the activities necessary to obtain a desired result.
- Establishing clear responsibility and accountability for managing key activities.
- Analysing and measuring of the capability of key activities.
- Identifying the interfaces of key activities within and between the functions of the organisation.

- Focussing on the factors such as resources, methods, and materials that will improve key activities of the organisation.
- Evaluating risks, consequences and impacts of activities on customers, suppliers and other interested parties.

Principle 5: System Approach to Management

Identifying, understanding and managing interrelated processes as a system contributes to the organisation's effectiveness and efficiency in achieving its objectives.

Key Benefits:

- Integration and alignment of the processes that will best achieve the desired results.
- Ability to focus effort on the key processes.
- Providing confidence to interested parties as to consistency, effectiveness and efficiency of the organisation.

Applying the principle of system approach to management typically leads to:

- Structuring a system to achieve the organisation's objectives in the most effective and efficient way.
- Understanding the interdependencies between the processes of the system.
- Structured approaches that harmonise and integrate processes.
- Providing a better understanding of the roles and responsibilities necessary for achieving common objectives and thereby reducing cross-functional barriers.
- Understanding organisational capabilities and establishing resource constraints prior to action.
- Targeting and defining how specific activities within a system should operate.
- Continually improving the system through measurement and evaluation.

Principle 6: Continual Improvement

Continual improvement of the organisation's overall performance should be a permanent objective of the organisation.

Key Benefits:

- Performance advantage through improved organisational capabilities.
- Alignment of improvement activities at all levels to an organisation's strategic intent.

- Flexibility to react quickly to opportunities.

Applying the principle of continual improvement typically leads to:

- Employing a consistent organisation-wide approach to continual improvement of the organisation's performance.
- Providing people with training in the methods and tools of continual improvement.
- Making continual improvement of products, processes and systems an objective for every individual in the organisation.
- Establishing goals to guide and measures to track, continual improvement.
- Recognising and acknowledging improvements.

Principle 7: Factual Approach to Decision Making

Effective decisions are based on the analysis of data and information.

Key Benefits:

- Informed decisions.
- An increased ability to demonstrate the effectiveness of past decisions through reference to factual records.
- Increased ability to review, challenge and change opinions and decisions.

Applying the principle of factual approach to decision making typically leads to:

- Ensuring that data and information are sufficiently accurate and reliable.
- Making data accessible to those who need it.
- Analysing data and information using valid methods.
- Making decisions and taking action based on factual analysis, balanced with experience and intuition.

Principle 8: Mutually Beneficial Supplier Relationships

An organisation and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value.

Key Benefits:

- Increased ability to create value for both parties.
- Flexibility and speed of joint responses to changing market or customer needs and expectations.

- Optimisation of costs and resources.

Applying the principles of mutually beneficial supplier relationships typically leads to:

- Establishing relationships that balance short-term gains with long-term considerations.
- Pooling of expertise and resources with partners.
- Identifying and selecting key suppliers.
- Clear and open communication.
- Sharing information and future plans.
- Establishing joint development and improvement activities.
- Inspiring, encouraging and recognising improvements and achievements by suppliers.

Source: International Organisation for Standardization. (n.d.). *Quality management principles*. Retrieved May 15, 2011, from http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/quality_management/qmp.htm

6. Quality Management Systems

An organisation will benefit from establishing an effective quality management system, which is defined as “a set of co-ordinated activities to direct and control an organisation in order to continually improve the effectiveness and efficiency of its performance”. The main thrust of a quality management system is in defining the processes, which will result in the production of quality products and services, rather than in detecting defective products or services after they have been produced.

6.1. The Benefits of a Quality Management System

A quality management system enables an organisation to achieve the goals and objectives set out in its policy and strategy. It provides consistency and satisfaction in terms of methods, materials and equipments, among others, and interacts with all activities of the organisation, starting with the identification of customer requirements and ending with their satisfaction, at every transaction interface.

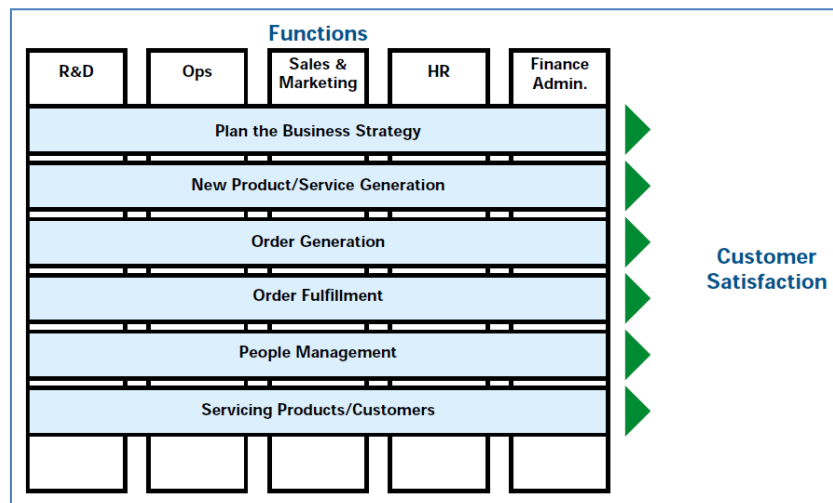
Management systems are needed in all areas of activity, regardless of large or small businesses,

manufacturing or services sector. A good quality management system will:

- Set direction and meet customers' expectations
- Improve process control
- Reduce wastage
- Lower costs
- Increase market share
- Facilitate training
- Involve staff
- Raise morale

6.2. Setting Up a Quality Management System

For organisations to function effectively, it is essential for them to identify and manage numerous interlinked, cross-functional processes, at the same time always ensuring that the customer satisfaction target is achieved.



Source: Quality management systems. (n.d.). Retrieved May 15, 2011, from http://www.businessballs.com/dtiresources/quality_management_systems_QMS.pdf

The adoption of a quality management system needs to be a strategic decision of an organisation. It is influenced by varying needs, objectives, the products or services provided, the processes employed and the size and structure of the organisation. A quality management system must ensure that the products or services conform

to customer needs and expectations, and the objectives of the organisation. Some of the issues to be considered when setting a quality management system are: design and build; deployment; control; measurement; review and improvement.

Design and Build

Design and build includes the structure of the quality management system, the process and its implementation. Its design must be led by senior managers to suit the needs of the organisation, and this is ideally done using a framework to lead the thinking. Design of the quality management system should come from determining the organisation's core processes and well-defined goals and strategies. It should also be linked to the needs of one or more stakeholders.

The process for designing and building the quality management system must also be clear, with the quality function playing a key role, the involvement and buy-in to the system must also come from all other functions.

Deployment

Deployment and implementation is best achieved using process packages, where each core process is broken down into sub-processes, and described by a combination of documentation, education and training. Increasingly, electronic deployment via Intranet is being adopted.

Control

Control of the quality management system will depend on the size and complexity of the organisation. Local control, where possible, is effective and good practice is found where key stakeholders are documented within the process and where the process owner is allowed to control all of the processes. Ideally, process owners or operators are involved in writing procedures.

Measurement

Measurement is carried out to determine the effectiveness and efficiency of each process towards attaining its objectives. It should include the contribution of the quality management system to the organisation's goals and could be achieved by measuring the following:

- Policy definition completeness
- Coverage of business
- Reflection of policies
- Deployment
- Usage
- Whether staff find the quality management system helpful in their work
- Speed of change of the quality management system
- Relevance of quality management system architecture to the job in hand

A form of scorecard that is deployed through the organisation, down to individual objective level can be employed, and the setting of targets at all levels is crucial.

Review

Review of the effectiveness, efficiency and capability of a quality management system is vital, and the outcome of these reviews should be communicated to all employees. Reviewing and monitoring should be conducted whether or not improvement activities have achieved their expected outcomes.

Improvement

Improvement should follow as a result of the review process, with the aim of seeking internal best practice. It is part of the overall improvement activities and an integral part of managing change within the organisation.

6.3. Audits, Reviews and Assessments

A good quality management system will not function or improve without adequate audits and reviews. Audits are carried to ensure that actual methods are adhering to the documented procedures, whilst system reviews should be carried out periodically and systematically, to ensure the system achieves the required effect.

There should be a schedule for carrying out audits, with different activities possibly requiring different frequencies. An audit should be conducted beyond the aim of just revealing defects or irregularities. They are for establishing the facts rather than finding faults. Audits do indicate necessary improvement and corrective actions, but must also determine if processes are effective and that responsibilities have been correctly assigned. The emphasis on process improvement and enhancing customer satisfaction in the revised standard will require a more thoughtful approach to auditing.

The generic steps involved in an audit are as follows:

- Initiation
 - Scope
 - Frequency
- Preparation
 - Review of documentation
 - The programme
 - Working documents
- Execution
 - Opening meeting
 - Examination and evaluation
 - Collecting evidence
 - Observations
 - Close the meeting with the auditee
- Report
 - Preparation
 - Content
 - Distribution
- Completion
 - Report
 - Submission
 - Retention

A quality management system review should take place possibly at least once a year, and should cover:

- Results of audits
- Customer feedback
- Process and product conformity
- Status of preventative and corrective actions
- Follow up actions from previous management reviews
- Changes that could affect the quality management system
- Recommendations for improvements

Meanwhile, outputs should include: improvements to the quality management system and processes; improvements of a product related to customer requirements and resource needs.

In addition, the procedures for conducting audits and reviews and the results from them should be documented, and also be subject to review. Internal system audits and reviews should be positive and conducted as part of the preventative strategy, and not as a matter of expediency resulting from problems.

The assessment of a quality system against a standard or set of requirements by internal audit and review is known as a first-party assessment or approval scheme. If an external customer makes the assessment of a supplier, against either its own, or a national or international standard, a second-party scheme is in operation. The assessment by an independent organisation, not connected with any contract between the customer and supplier, but acceptable to them both, is an independent third-party assessment scheme. The latter usually results in some form of certification or registration by the assessment body.

For third-party certification schemes to be of value they need to be backed by accreditation. An advantage of third-party certification, when backed by accreditation, is the assurance that it provides to customers that obviates the requirements for their own detailed checks but in addition it enables the certified organisation to use the renowned

national accreditation mark to denote this assurance, thus improving its competitiveness.

7. Awards and Certifications

7.1. Business Excellence Initiative

The Business Excellence (BE) initiative aims to help organisations in Singapore to “strengthen their management systems and processes for high performance”. The initiative is based on an “internationally comparable and holistic model for managing an enterprise for excellence. Singapore Quality Class and Singapore Quality Award are key milestones of overall performance on the business excellence framework. The framework also includes niche standards that focus on management capabilities for people, innovation and service, which are key enablers for business excellence.

Singapore Quality Class

The Singapore Quality Class (SQC) is a certification given to organisations that have achieved all-round business excellence. Launched in 1997, it is the national recognition for organisations in Singapore with management systems and processes in place to achieve all-round business excellence. The SQC is one of the four certifications under the Business Excellence Framework, and is awarded to businesses of all types and sizes.

More information on the Singapore Quality Class certification can be obtained from the following website:

<http://www.spring.gov.sg/qualitystandards/be/bec/pages/singapore-quality-class.aspx>

Singapore Quality Award (SQA)

The Singapore Quality Award (SQA) is the “highest national award given to organisations who have achieved all-round business excellence”. Launched in 1994, it is awarded to organisations that have put in place management systems and processes

that achieve outstanding levels of business excellence in all areas, and often referred to as “world-class organisations”. The award is benchmarked against international quality awards such as the European Quality Award and Australian Business Excellence Award, among others.

More information on the Singapore Quality Award can be obtained from the following website:

<http://www.spring.gov.sg/qualitystandards/be/bea/pages/singapore-quality-award.aspx>

7.2. ISO 9000 Series

The ISO 9000 series is a family of standards published by the International Organisation for Standardisation (ISO) that addresses quality management. It is the most established quality framework world-wide, used by more than a million organisations in 178 countries. It sets the standard not only for quality management systems, but management systems in general. ISO 9000 series helps all kinds of organisation to succeed through improved customer satisfaction, staff motivation and continual improvement.

The ISO 9000 series of standards comprise:

- ISO 9000
Fundamentals and vocabulary: Introduces the user to the concepts behind the management systems and specifies the terminology used.
- ISO 9001
Requirements: Sets out the criteria that need to be met in order to operate in accordance with the standard and gain certification.
- ISO 9004
Guidelines for performance improvement: Based upon the eight quality management principles, these are designed to be used by senior management as a framework to guide their organisations towards improved performance by considering the needs of all interested parties, not just customers.

More information on the ISO 9000 series can be obtained from the following website:

http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/quality_management.htm

Case Study

Seawaves Frozen Food

Hazard Analysis and Critical Control Points or HACCP is a systematic preventive approach to food safety and pharmaceutical safety. It is used in the food industry to identify potential food safety hazards at all stages of food production and preparation processes including packaging and distribution. HACCP is also a quality management tool commonly used by food manufacturers to maintain the quality of food during storage and transportation.

Seawaves Frozen Food Pte Ltd is a major supplier of surimi-based products. Established in 1982, the company has big plans to increase the export of its products to as much as 70%. Hence, formal food safety measures are regarded as a basic responsibility to its overseas and local customers. Therefore, the first step in doing so is the HACCP food safety management certification that the company obtained in September 2009.

As a manufacturer and distributor of frozen food items, Seawaves' main products include cuttlefish ball, cuttlefish paste, prawn balls and prawn paste, among others. The products are manufactured, packaged and delivered from its Pandan Loop factory, which they moved into in November 2008. Due to Singapore's humid climate, surimi-based products need to be handled with extra care and caution as the quality can deteriorate quickly.

Although the company already had in place its own food safety standards, it decided that HACCP was the way to progress as it wanted a formal system for its employees to follow. More than 20 to 25 employees are involved in the HACCP process daily.

For example, raw cuttlefish paste is cooked raw and moulded into balls for 15 minutes in a water temperature of at least 80°C, and the core temperature of the balls must be at least 75°C. This is to prevent the presence of pathogen due to inadequate cooking temperature or time duration. The duration of the cooking is strictly monitored as the finished product has to maintain a bouncy texture without being too soft and the cuttlefish paste should not be overcooked. After the cooked cuttlefish balls are cooled, the next CCP involves blast freezing the product for one to three hours. Following that, the frozen cuttlefish balls are taken out in batches for packing and sealing. The packing and sealing is done in an air-conditioned facility and within a certain time to maintain the integrity of the product. All packaged products go through

a metal detector to ensure that there is no presence of metal fragments within the product or the packaging. In the event of a non-conforming product, the product will be immediately quarantined for investigation. Finished products are transferred into freezer storage at -18°C. During the delivery process, the temperature is maintained at -15°C with the help of temperature loggers. The company's delivery vans have temperature loggers that help to ensure the optimum temperature till it is delivered.

The work area where the products are manufactured is designated as a "one entrance and one exit" area for the workers, so that there is no cross-contamination of raw ingredients and cooked food from different work areas. Workers have to gear up in the proper attire when they enter the manufacturing area. They are required to step into a sanitising footbath that cleans the factory boots of any germs and bacteria before they enter the manufacturing facility.

Seawaves wants to target more Chinese who are living overseas. They currently export their products to suppliers in Japan, China, Hong Kong and Australia. The company hopes that with the HACCP system in place, it can expand its reach into overseas markets such as the United States that requires the HACCP certification. Mr William Tang, managing director of Seawaves said that HACCP is important to them as it "opens the doors for export", and it is a common platform for them to communication with customers who value the HACCP requirement.

Greenpac Pte Ltd

Greenpac was established in September 2002 offering unique services. The "knowledge-based company's" forte lies in designing customised, environment-friendly and cost-effective packaging for customers. This process involves a holistic approach that comprises the re-engineering of existing designs, sourcing for suitable materials and tapping on technological advances, which are made possible through working closely with its clients by finding out their needs, and its suppliers who manufacture the packaging.

Such measures translate to concrete benefits and savings for the client. For example, Greenpac's packaging designs aim to use less material, maximise carrying capacity, ensure that contents are less susceptible to damage, and are easier and faster to pack. The materials used may also be reusable or recyclable, all of which reduces waste. An example is Greenpac's Revolutionary-System Concept Packaging (RSCP™) design using Oriented Strand Board, which fulfils

everything in the checklist - it contains no nails, is weather-proof and strong enough to bear prescribed loads, and is also collapsible and space-saving.

Once regarded as a sector in decline, Greenpac has injected new life into the packaging industry and chiselled a niche for itself. It also proves that innovation can make the difference. Over the years, it has developed expertise and experience in this speciality area, and has even patented its packaging designs. The company has also moved into supply chain services with its trademark technological savvy, with a real-time, web-based management system which allows its customers quick and convenient access to information.

The desire to go beyond good as well as ensuring quality for its products and services provided the impetus for Greenpac's push for the SQC. Its Managing Director, Ms Susan Chong saw SQC as a way to measure and benchmark the company's performance, using the business excellence framework, in aspects such as leadership, manpower planning, processes and other key business areas. She believes all these are necessary in helping to set the company's goals for both the short and long term.

Ms Chong also sees SPRING's business excellence framework as a "good platform to know where we stand" and to structure Greenpac in terms of establishing and maintaining standards, processes and best practices. Despite the bumps along the SQC journey, Susan recalls how the staff's shared vision and commitment to the company's goals meant that issues that cropped up, such as the need to implement the demanding Key Performances Indicator (KPI) system, were resolved in-house instead of resorting to the services of an external consultant.

As for how the SQC certification process has benefited Greenpac, Ms Chong praises the improvements that the company has seen in staff productivity and discipline, the implementation of an employee suggestion scheme and changes to essential workflows which have led to greater overall efficiency.

At Greenpac, Ms Chong stresses, business excellence is more than a numbers game. The process was not pursued merely to adhere to SQC standards or to maintain the necessary KPI levels. The main reason was that it complemented and tied in with the company's core values of professionalism and efficiency. Obtaining the ISO 9001 and ISO 14000 awards in just its second year of operation is a case in point.

Articles can be retrieved from
NLB's e-Resources –
<http://eresources.nlb.gov.sg>

Books are available at the Lee
Kong Chian Reference Library.

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SINGAPORE PRODUCTIVITY ASSOCIATION

The Singapore Productivity Association (SPA) was set up in 1973 as an affiliated body of the then National Productivity Board, now SPRING Singapore. Its objective is to promote the active involvement of organisations and individuals in the Productivity Movement and to expedite the spread of productivity and its techniques.



SINGAPORE
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CPP Course Syllabus	
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<p>Module 1: Understanding Productivity (Duration: 1 day)</p> <ul style="list-style-type: none"> • Introduction to Productivity and Quality Concepts • Factors Affecting Enterprise Productivity • Productivity Movement in Singapore • Productivity Promotion in Companies • Productivity Challenges 	
<p>Module 2: Productivity Tools, Techniques & Management Systems (Duration: 3 days)</p> <ul style="list-style-type: none"> • Business Excellence • Productivity Measurement & Analysis • Process management: <ul style="list-style-type: none"> ▪ Cost of Quality ▪ Lean Six Sigma ▪ Process Mapping & Analysis • Integrated Management Systems 	<p>Module 2: Productivity Tools, Techniques & Management Systems (Duration: 3 days)</p> <ul style="list-style-type: none"> • Delivering Service Excellence • Productivity Measurement & Analysis • Process management: <ul style="list-style-type: none"> ▪ Cost of Quality ▪ Lean Six Sigma ▪ Process Mapping & Analysis
<p>Module 3: Innovation & Service Excellence (Duration: 3 days)</p> <ul style="list-style-type: none"> • Knowledge Economy & Innovation • Service Excellence • Team Excellence 	<p>Module 3: Innovation & Service Excellence (Duration: 3 days)</p> <ul style="list-style-type: none"> • Introduction to Service Excellence & Sales Productivity • Store Management & the Roles of a Store Manager • Minimising Operational Constraints & Focusing on Sales • Setting Goals & Analysing Statistics • Coaching & Motivating Sales Staff • Service Behaviours that Encourage Business
<p>Module 4: Critical Success Factors (Duration: 1 day)</p> <ul style="list-style-type: none"> • Management Commitment • Managing & Sustaining Change • Overcoming Resistance to Change • Training and Education • Planning for Implementation and Control of Productivity Improvement Programme • Briefing on project assignment & Role of Productivity Practitioner 	

As part of the CPP curriculum, participants are required to start a productivity improvement project upon completion of the in-class component. Project guidance will be provided by a professional consultant assigned for this purpose and is for a total of 2 man-days.

Funding & Payment

The course is supported by the Singapore Workforce Development Agency (WDA). Funding is available at 70% and 50% of the course fees respectively for SMEs and MNCs/LLEs/Statutory Boards. Please find the prices payable in the net fee table below:

For SMEs:	Net Fee	Nett Fee with GST
SPA Member (S\$3,700)	S\$1,110	S\$1,187.70
Non-Member (S\$3,950)	S\$1,185	S\$1,267.95
For MNCs/LLEs/Statutory Boards	Net Fee	Nett Fee with GST
SPA Member (S\$3,700)	S\$1850	S\$1979.50
Non-Member (S\$3,950)	S\$1975	S\$2113.25

The schedule of our next runs is as follows:

June - July 2011		
Date	Module	Time
Wednesday, 15 June 2011	Module 1	9-5 pm
Friday, 17 June 2011	Module 2	9-5 pm
Wednesday, 22 June 2011		9-5 pm
Friday, 24 June 2011		9-5 pm
Wednesday, 29 June 2011		9-5 pm
Friday, 1 July 2011	Module 3	9-5 pm
Wednesday, 6 July 2011		9-5 pm
Thursday, 14 July 2011	Module 4	9-5 pm

July - August 2011		
Date	Module	Time
Wednesday, 20 July 2011	Module 1	9-5 pm
Friday, 22 July 2011	Module 2	9-5 pm
Wednesday, 27 July 2011		9-5 pm
Friday, 29 July 2011		9-5 pm
Wednesday, 3 August 2011	Module 3	9-5 pm
Friday, 5 August 2011		9-5 pm
Wednesday, 10 August 2011		9-5 pm
Tuesday 16 August 2011	Module 4	9-5 pm

September - October 2011		
Date	Module	Time
Wednesday, 28 September 2011	Module 1	9-5 pm
Friday, 29 September 2011	Module 2	9-5 pm
Wednesday, 5 October 2011		9-5 pm
Friday, 7 October 2011		9-5 pm
Wednesday, 12 October 2011		9-5 pm
Friday, 14 October 2011	Module 3	9-5 pm
Wednesday, 19 October 2011		9-5 pm
Thursday 20 October 2011		9-5 pm

Core Faculty Members

MR. LAM CHUN SEE

B. ENG IN INDUSTRIAL & SYSTEMS ENGINEERING (UNIVERSITY OF SINGAPORE)

Chun see manages his own consultancy practice, Hoshin Consulting and is also an associate consultant/trainer to the PSB Corporation and Singapore Productivity Association. Prior to running his own practice, he has had years of experience as an industrial engineer with Philips, and trainer and consultant with the then National Productivity Board, APG Consulting and Teian Consulting, He was conferred the Triple-A Award in 1989 for helping to transfer Japanese know-how, particularly in the area of 5S, into local programmes and packages. Throughout his years of consultancy experience, Chun See has assisted many companies in analyzing their productivity and quality objectives and performance; primarily through the application of the PDCA technique and basic QC tools.

MR. LEE KOK SEONG

M.SC. IN CHEMICAL ENGINEERING (IMPERIAL COLLEGE, LONDON UNIVERSITY), B.SC. IN CHEMICAL ENGINEERING (NATIONAL TAIWAN UNIVERSITY)

Kok Seong has accumulated vast experience in the areas of productivity training and management consultancy throughout his 30 years of experience with the Standards, Productivity and Innovation Board (SPRING). He has provided consultancy

assistance and training for numerous organizations both within and outside of Singapore in the areas of Productivity Management, Operation and Production Management, total Quality Management, Total Productive Maintenance, Shopfloor Management, Occupational Safety Management, Industrial Engineering Applications and Supervisory Management. He has also been greatly involved in the pinnacle Singapore Quality Award (SQA) initiative since its inception in 1993. his track records include the assessments and site visits of award recipients like Micron Semiconductor (formerly Texas Instruments), Motorola, Baxter Healthcare, Philips Tuner Factory and Teck Wah Industrial Corporation Ltd. Mr. Lee is currently a certified SQA Senior Assessor, as well as a resource person for Basic and Advanced Training Courses for Productivity Practitioners, a position he has taken on since 2007.

MR. LOW CHOO TUCK

M.SC. IN INDUSTRIAL ADMINISTRATION (UNIVERSITY OF ASTON, UK); B.SC. IN PHYSICS (NUS); DIP IN QUALITY CONTROL INSTRUCTORS (INTERNATIONAL QUALITY CENTRE, NETHERLANDS); CERTIFICATE IN PRODUCTIVITY DEVELOPMENT (JAPAN PRODUCTIVITY CENTRE); CERTIFICATE IN ADVANCED MANAGEMENT DEVELOPMENT (INSEASD)

Choo Tuck currently provides training and advisory services in productivity and quality management to companies and government in the Asean region and

Middle East. He was previously the Executive Director of the Restaurant Association of Singapore as well as the Singapore Productivity Association, and was also the Director for Strategic Planning in SPRING Singapore. During his many years of service with SPRING Singapore, he gained wide experience in productivity training, management consultancy and productivity promotion, and has helped more than a 100 companies in improving productivity, quality control and business excellence, including organizations such as Cycle & Carriage, Motorola, PUB and DBS. On top of that, he has also served as an Asian Productivity Organisation (APO) expert on Productivity for several APO member countries, and was part of a team of experts engaged by the Singapore cooperation Enterprise to provide productivity expertise to the Government of Bahrain in 2007 and 2008.

MR. QUEK AIK TENG

B.ENG (HON.) IN MECHANICAL ENGINEERING (UNIVERSITY OF SHEFFIELD); DIP. IN BUSINESS EFFICIENCY (INDUSTRIAL ENGINEERING_ (PSB-ACADEMY); CERTIFIED MANAGEMENT CONSULTANT (CMC); PRACTISING MANAGEMENT CONSULTANT (PMC); MEMBER, INSTITUTE OF MANAGEMENT CONSULTANTS (IMC) SINGAPORE

Aik Teng currently manages his own consultancy, AT Consulting Services. Ne of his most recent projects includes being the LEAD Project Manager for the Singapore Logistics Association. Prior to running his own consultancy, he has been with SPRING Singapore for 20 years, and was the Head of the Organisation Excellence Department from 2004-05. He was also SQA Lead Assessor and Team Leader up

till 2008 and has been involved in the SQA initiative since its inception in 1993. tasked to start up the consultancy unit within the then Productivity & Standards Board (PSB) to provide training and consultancy services to organisations, his consulting team assisted close to 30 organisations during that period. He was also involved in a project coordinated by the Singapore Cooperation Enterprise (SCE) to assist the Bahrain Labour Fund in their Labour Reform strategy, which included helping the Bahrain government to initiate a Productivity Movement as well as develop the productivity of the local enterprises. In addition, he was appointed as Project Manager to assist the Government of Botswana to implement a national Productivity Movement, from 1994 to 2003. Botswana is currently held as a model of Productivity in the Pan-Africa region.

MR. WONG KAI HONG

MBA IN STRATEGIC MARKETING (HULL), BSC (NUS)

Kai Hong is a business consultant, management trainer and company director. He has spent almost 2 decades in the consumer products industry, having worked with retailers like Isetan, Metro, Royal Sporting House, The Athlete's Foot and Sunglass Hut; brands like Reebok and Doc Martens; and technology group Wearnes Technology. He has been involved with various functions including operations, business development, project management, human resource, training, marketing, logistics, budgeting and general management. He has developed businesses in Singapore and many Asian cities such as Seoul and Beijing.

For registration or more information, write to us at CPP@spa.org.sg.

Alternatively, you could also contact our secretariat:

Ms. Leanne Hwee

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Mr. Ashton Chionh

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