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## Quality Circle

### 1. Introduction

Quality circle was first introduced by large Japanese firms in a systematic attempt to involve all their employees, at every level, in their organisation's drive for quality. It is a two-way communication tool, to identify and resolve the problems in organisations. Although most commonly found in the manufacturing sector, quality circles are applicable to a wide variety of business situations and problems. They are based on two ideas: that employees can often make better suggestions for improving work process than management; and that employees are motivated by their participation in making such improvements. Hence, when implemented correctly, quality circles can help organisations reduce costs, increase productivity and improve employee morale.

### 2. What is a Quality Circle?

A quality circle is defined as "a small group of employees doing similar or related work who meet regularly to identify, analyse and solve product-quality and production problems and to improve general operations". The circle, a relatively autonomous unit usually led by a supervisor or a senior worker and organised as a work unit, is a participatory management technique that enlists the help of employees in solving problems related to their own jobs.

### 3. The Objectives of Quality Circles

The objective of a quality circle is to bring about improvement in quality of a product or service by forming groups and using the ideas and thoughts of the group.

Some of the other objectives include:

- To contribute towards the improvement and development of the organisation.

- To overcome the barriers that may exist within the prevailing organisational structure so as to foster an open exchange of ideas.
- To develop a positive attitude and feel a sense of involvement in the decision making processes of the services offered.
- To respect humanity and to build a happy work place worthwhile to work.
- To display human capabilities totally and in a long run to draw out the infinite possibilities.
- To improve the quality of products and services.
- To improve competence, one of the goals of all organisations.
- To reduce costs and redundant efforts in the long run.

#### 4. The Benefits of Quality Circles

The intended purpose of a quality circle is to:

- Support the improvement and development of the organisation
- Respect human relations in the workplace and increase job satisfaction
- Draw out employee potential

Quality circles encourage employee participation as well as promote teamwork. It motivates people to contribute towards organisational effectiveness through group processes and hence improving operational efficiency. The formation of quality circles is also known to have helped organisations bring out several innovations and changes, apart from being a valuable tool for increasing productivity.

Other benefits include:

- Promotes job involvement
- Creates problem solving capability
- Improves communication
- Promotes leadership qualities
- Promotes personal development
- Develops a greater awareness for cleanliness
- Develops greater awareness for safety
- Improves morale through closer identity of employee objectives with organisation's objectives
- Reduces errors
- Enhances quality
- Inspires more effective team work
- Builds an attitude of problem prevention
- Promotes cost reduction
- Develops harmonious manager, supervisor and worker relationship
- Improves productivity
- Reduces downtime of machines and equipment
- Increases employee motivation

## 5. Limitations of Quality Circles

While quality circle is an excellent technique for motivating the employees and improving quality of products and the work culture in a company, it is not a panacea for all problems in an organisation. It is not a substitute for the main tasks of the management which is planning, organising, employing and allocating resources including human resource, directing, controlling, checking, reviewing and preparing budget. Quality circle is also not directly responsible for improvement of quality,

although this is one of its main objectives. It is meant for improving the work, for which it should constantly strive. It should aim at making the work more meaningful and effective, and thereby more ethically satisfying for the persons involved in doing it. Quality circle is a people's movement for improvement of work culture that includes improvement of quality and productivity as its main objective.

## 6. Implementing a Successful Quality Circle

### 6.1. Formation of a Quality Circle

Quality circles can be formed for any purposes, where identification and resolution are needed. For a quality circle to be more effective, the maximum number of members should not be more than ten.

The following basic elements constitute the structure of a quality circle:

- Management
- Steering committee
- Coordinator
- Facilitator
- Leader
- Members
- Non-members

The success of the quality circle depends solely on the attitude of the management, who plays a critical role to ensure the success of the implementation of quality circles in the organisation. The steering committee, also called middle management, comprises board of directors or a coordinator who plays a positive role in quality circles activities for the success of the efforts. A coordinator is an individual responsible for coordinating and directing the quality circles activities within an organisation and carries out such functions as would make the

operations of quality circles smooth, effective and self sustainable. Meanwhile, a facilitator acts as a catalyst, innovator, promoter and teacher and is nominated by the management. The facilitator is also appointed to be the bridge between the top management and the quality circle. The members, among themselves, elect a leader of the quality circle and they may decide to have a leader by rotation. Members of the quality circle are the small group of people from the same work area or doing similar type of work, whereas non-members are those who are not members of the quality circle but may be involved in the circle recommendation. Quality circle is purely voluntary, irrespective of the employees' cadre and position.

## 6.2. Quality Circle Meetings

Meetings are important component of quality circle's working, and ideally should be attended by all the members. In general, meetings are usually held during office hours, and take place once a week or once in a fortnight. Regularity of the meetings is important. The facilitator need not be present at all time. However, he should be in touch with the members, particularly with the leader before and after the meeting.

Some of the activities that may take place during a quality circle meeting are:

- Identifying a them or a problem to work on
- Getting training as required to enable members to analyse problem(s)
- Analysing problem(s)
- Preparing recommendations for implementing solution(s)
- Follow up of implementation of suggestions
- Preparing for a presentation to the management

## 6.3. Brainstorming

Brainstorming unlocks the creative power of the quality circle. It can be used to list down the problems faced by the organisation, their causes, potential and alternative solutions, as well as the potential effects if a certain suggestion is implemented.

In ensuring the success of the brainstorming process, it is important for the circle to follow the following rules:

- The subject for brainstorming should be clear and accurate.
- Each member will give their opinion/idea at each turn, and this goes on for several rounds until all ideas of the group have been exhausted.
- A tension-free atmosphere must be maintained to encourage free expression of ideas.
- Every idea expressed should be recorded – written on the white board, or noted down by the secretary.
- At the end of the brainstorming session, all ideas expressed should be evaluated one by one and shortlisted.
- Voting is used to list the ideas according to priority.

### Basic principles of brainstorming

1. Defer evaluation during the phase of generating ideas. No criticism of any ideas should be allowed in a brainstorming session. Good natured laughter and informality should be encouraged to enhance the climate for innovative activity.
2. Hitch-hike on previously expressed ideas. Encourage freewheeling and get more and more ideas however bad or silly they may appear to be in the first place.

3. Another way of idea generation is to combine more than two or several ideas to form a single better idea. Process of association can also be used to create new ideas.
4. Quantity begets quality. The more ideas are generated, the higher is the probability of hitting some brilliant ones. One interesting finding is that better ideas are produced in the second half of a brainstorming session than in the first half.
5. The more fantastic the ideas, the better. A fantastic idea is one that does not at all seem a practical idea and serves the important function of demolishing conventional patterns of thinking. While the idea itself may not be practicable, it may trigger other ideas that might not only be novel but also useful.
6. Give equal opportunity to all members in the group to participate. For some it may take courage to start. Be patient. Welcome and encourage their ideas.
7. Select the best idea(s) after thoroughly scrutinising all ideas coming up during brainstorming.

## 7. Quality Circle Tools

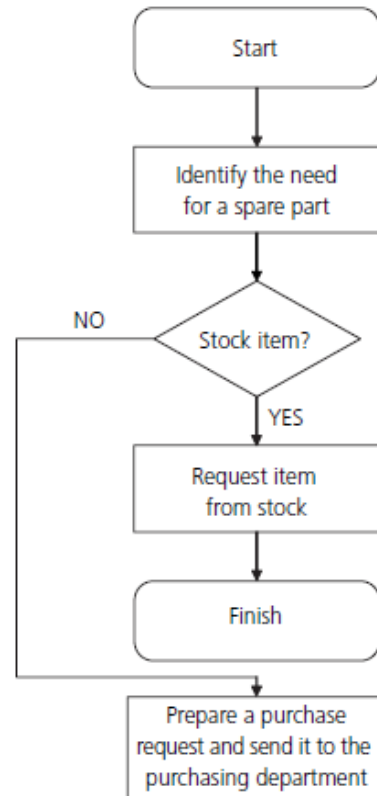
Quality circle activities make use of the creative mind and enables self-fulfilment of workers, as they are able to make decisions. Below are seven tools and techniques commonly adopted and used.

### 7.1. Process Flow Charts

Process flow charts record a series of events and activities, stages and decisions in a form that can be easily understood and communicated to all. The figure below gives an example of a flow chart. Flow charts can also be used as a problem-solving tool. For this, first a flow chart is drawn up by a team of persons in order to reflect the way the process actually works. Then the members of the group are asked to draw up a flow chart on how the process should work ideally. The difference between the two represents the

problems to be solved. It thus helps first to understand the process and then to make improvements.

## Flow chart for obtaining spare parts for maintenance activity



Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

## 7.2. Pareto Analysis

Pareto analysis is based on a bar graph and a line chart. The bar graph lists in descending order the problems affecting a process. The line chart accumulates the percentage of the total number of occurrences for each problem area. The other name of this tool is the 80-20 rule, indicating that 80 percent of the problems stem from 20 percent of the causes. It helps to identify the most important area to work to solve the problem. Joseph M. Juran, an expert on quality control, has



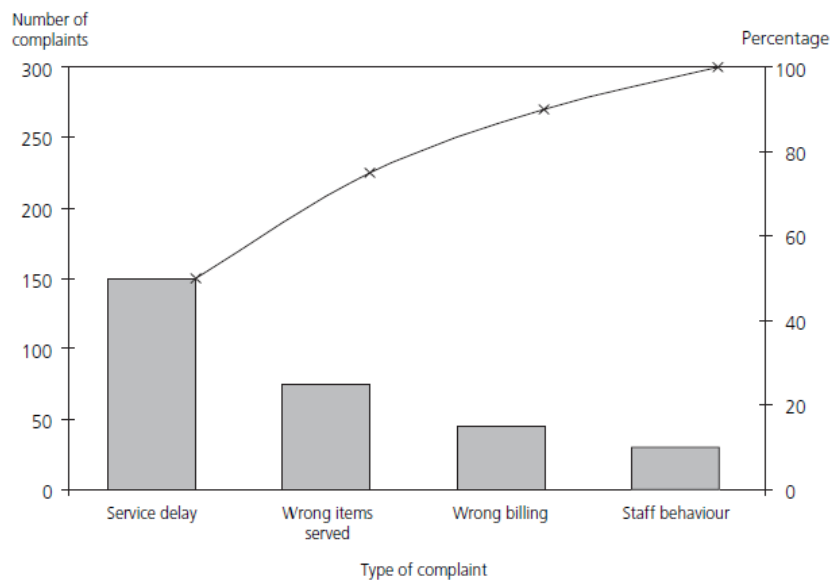
said that one should concentrate on the “vital few” rather than the “trivial many” in tackling quality problems.

Below is an example of a restaurant that is trying to analyse and prioritise the complaints received from its customers. The complaint data is shown and the Pareto diagram of this data is shown in table and figure below.

Type of complaints	Number	Percentage	Cumulative percentage
Service delay	150	50	50
Wrong items served	75	25	75
Wrong billing	45	15	90
Staff behaviour	30	10	100
<b>Total</b>	<b>300</b>	<b>100</b>	

Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

**Pareto analysis of complaints received in a restaurant**

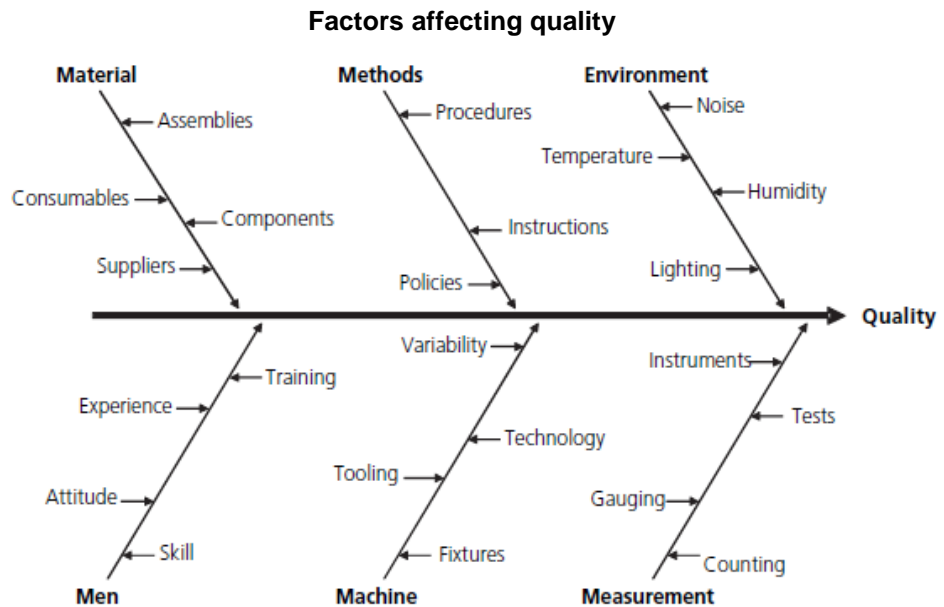


Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

The above analysis shows that 75 percent of customer complaints are related to service delays and wrong items being served. Based on this finding, the restaurant can use cause and effect diagrams, or also known as Ishikawa diagrams, to determine the root cause of these two major problems.

### 7.3. Ishikawa Diagram

Ishikawa diagrams represent the relationship between a problem and its potential causes. They are also known as fishbone, or cause and effect, diagrams. These diagrams deal only with factors, not quantities. To prepare a fishbone diagram, all the causes relating to a problem (effect) are collated through brainstorming among the people concerned. The problem is indicated on the horizontal arrow. All the causes listed from the brainstorming are classified by theme. Each theme represents a diagonal attached to the spine of the diagram. Individual causes are listed along the diagonal. The following figure shows an Ishikawa diagram of factors affecting quality.

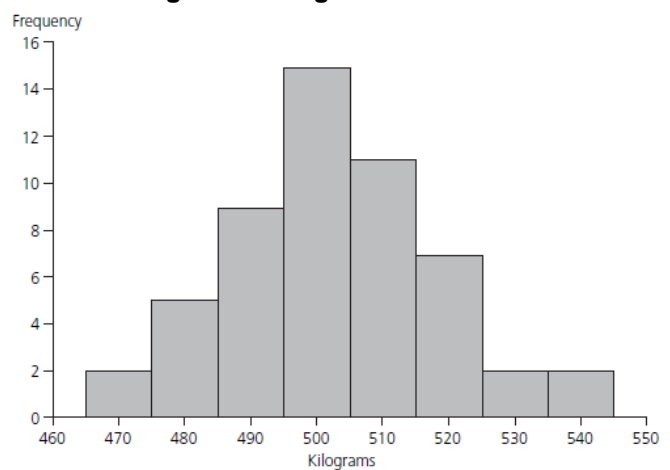


Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

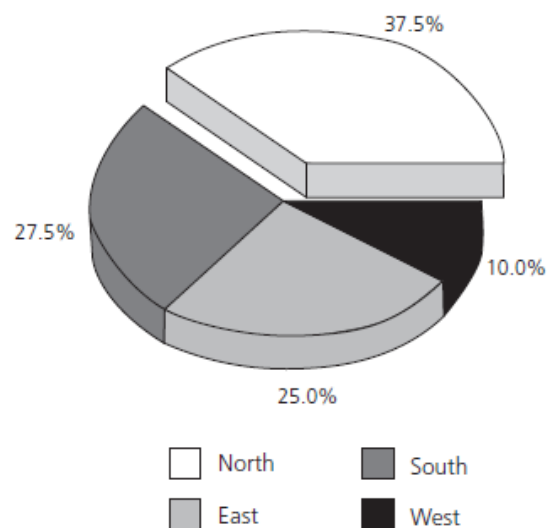
## 7.4. Graphs

There are numerous types of graphs, ranging from simple plotting points to a graphic presentation of complex and interrelated data. Graphs are a good way to organise, summarise and display data for subsequent analysis. The most common examples of graphs are histograms, line graphs, and pie charts).

**Histogram of weights of bars**

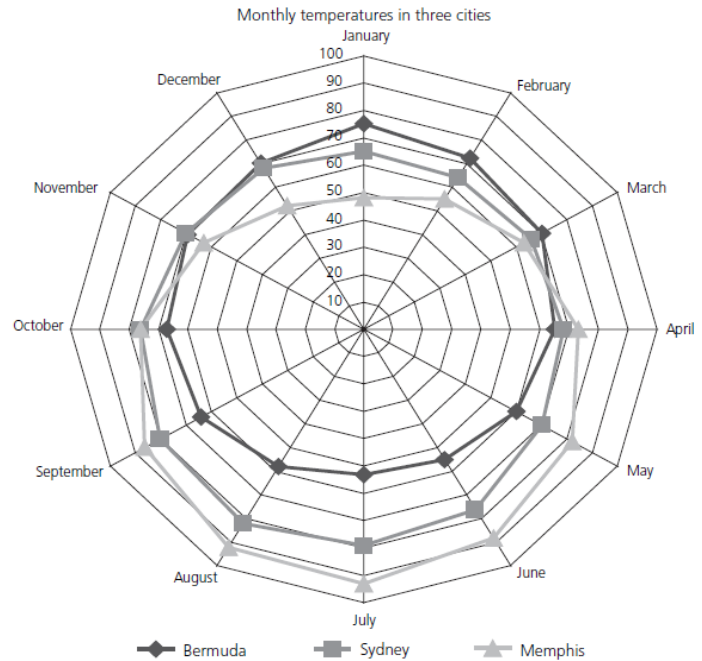


**Pie chart of customer complaints, by zone**



Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

## Radar chart of monthly temperatures in three cities



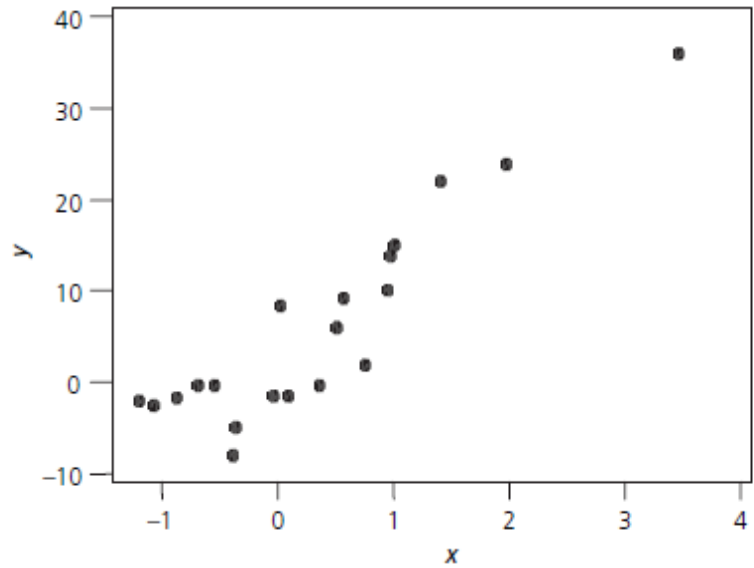
Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

### 7.5. Check Sheets

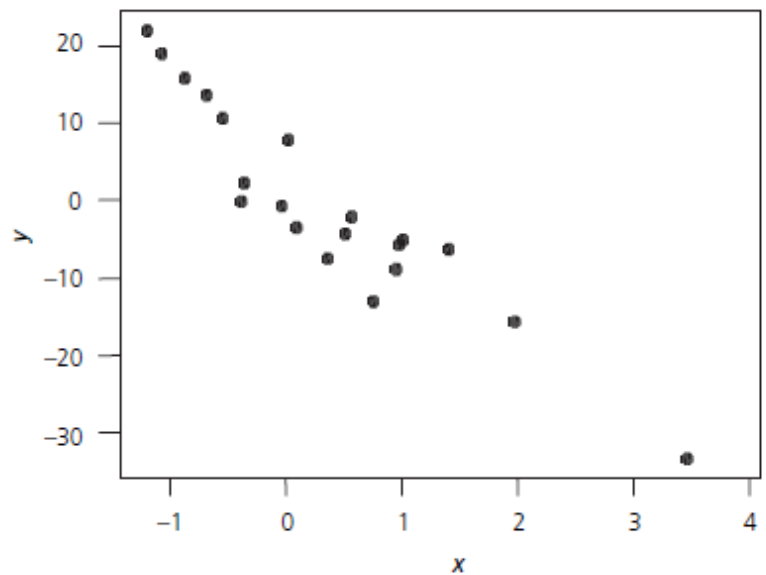
Check sheets, or tally charts, are a simple device on which data is collected by putting a mark against predetermined items of measurement. The purpose for which the data is collected should always be clear. For example, check sheets can be used to track events by factors such as timeliness (in time, one day late, two days late, etc.), reasons for failure during inspection (defects like blow holes, cracks, etc.) or number of customer complaints per day. An example check sheet for the final inspection of bracket casting in a foundry shop is shown in figure below.



Scatter diagram: Positive relationship



Scatter diagram: Negative relationship



Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

## 7.7. Control Charts

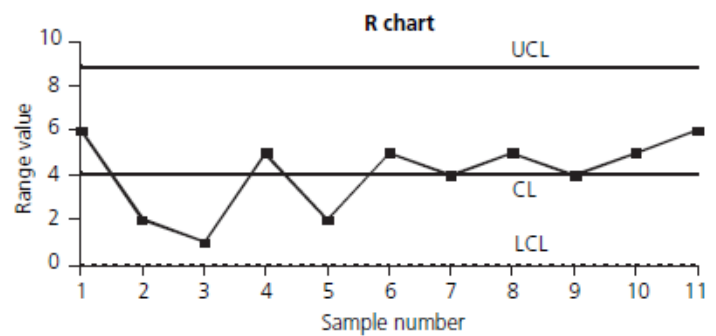
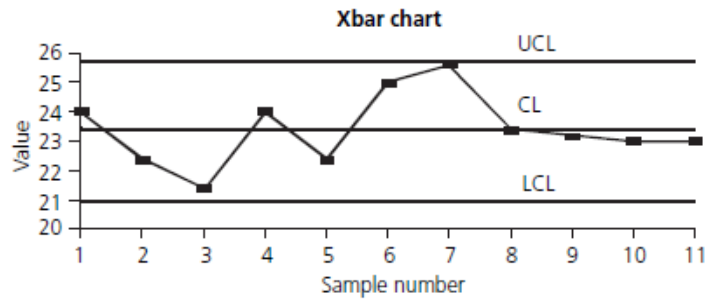
Control charts are pictures of variations found in a process. The data of measurement or observations is plotted on graphs against time. These charts consist of two lines, called upper control limit (UCL) and lower control limit (LCL). These are not the same as specification tolerances; rather they are the values within which a process is expected to operate and if the results of measurements exceed these limits then the cause must be investigated and action taken on the process immediately.

In order to reduce variations in the process, fundamental changes may need to be made in methods, machines and/or materials. Control charts help to monitor and control quality by acting as a set of process “traffic lights” and are valuable in all types of activity.

Control charts can be plotted for variable or continuous data (such as weight of a bag, temperature of cold storage, time of baking, dimension of a rod or speed of a conveyor).

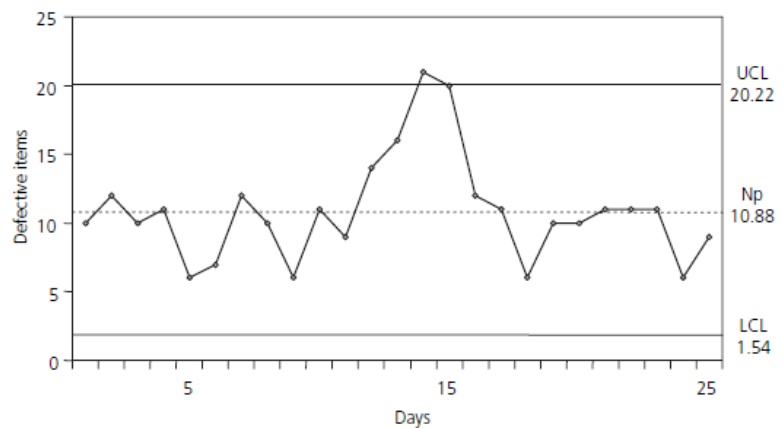
Control charts for variables consist of mean and range charts. Control charts can also be plotted for attribute or discrete data such as the number of defects found in a lot, the number of cracks in a piece, the number of missing stitches in a garment, percentage delays in shipments or percentage delays in responding to customer complaints. As regards attribute data, the two most popular charts are control charts for the number of defective items in a lot, known as an “np-chart” and the proportion of defective items, known as a “p-chart”.

## Mean (Xbar) and range (R) charts



UCL = upper control limit  
 CL = control limit  
 LCL = lower control limit

## Number of defective items (np-chart)

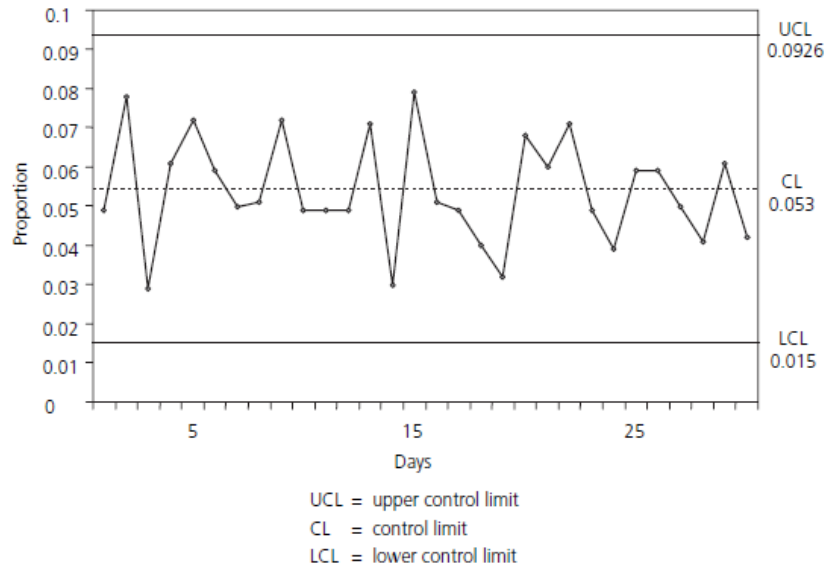


UCL = upper control limit  
 Np = number of defective items  
 LCL = lower control limit

Source: Product quality: A guide for small and medium-sized enterprises. (2006).  
 Retrieved September 30, 2011, from  
[http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)



**Proportion of defective items (p-chart)**



Source: Product quality: A guide for small and medium-sized enterprises. (2006). Retrieved September 30, 2011, from [http://www.unido.org/fileadmin/media/documents/pdf/tcb\\_product\\_quality.pdf](http://www.unido.org/fileadmin/media/documents/pdf/tcb_product_quality.pdf)

## 8. ICQCC 2011 Yokohama Summary Report

### About International Convention on Quality Control Circles (ICQCC)

In conjunction with the 50<sup>th</sup> anniversary of QCC activities, the Union of Japanese Scientists and Engineers (JUSE) organized ICQCC 2011 in Yokohama. "International Convention on Quality Control Circles" was initially started as "International Exchange of East Asia QC Circles" among Japan, Korea, and Taiwan in 1976. The event became an official international convention in 1978 when the very first ICQCC was held in Tokyo, Japan. Since then, ICQCC has been held annually by rotating the host country among 13 Asian countries and regions. QC Circle activity is now growing internationally and positioned as part of the TQM practice. Beyond the boundaries of countries and industries, QC Circle activity is regarded as an essential small group activity and is highly recognized for its effectiveness in solving problems at workplace, vitalizing office environment, improving quality and cost.

## ICQCC 2011

ICQCC 2011 was organised by the Union of Japanese Scientists and Engineers (JUSE). JUSE was established in May 1946 and authorized as the foundation of a juridical body by the Science and Technology Agency (reformed Ministry of Education, Culture, Sports, Science and Technology) of Japanese Government. The field of science and technology that JUSE has been involved in since its establishment belongs to the Soft Technology where the mathematical and statistical methods can be applied to the corporate management. Quality control has been the primary subject of JUSE and great efforts have been bent to the development and dissemination of the technology.

Today, JUSE is widely known in and out the country as a "Center of Quality Control in Japan". JUSE has managed the Deming Prize, which has been well known in the field of the Total Quality Management. Having gained international attention as a home of QC Circle activity, Japan is now determined to fulfil a role with our best effort to lead the world manufacturing at ICQCC'11 Yokohama. QCC activities officially started in Japan in 1961 with the establishment of QC Circle headquarters of Japan at JUSE. Currently the activities are accepted widely by the Asian organizations as a tool for human resource development and operational excellence.

There were a total of 1,162 delegates from 13 QC organizations collectively:

India	336	Korea	19
Japan	319	Philippines	17
Malaysia	152	China	10
Thailand	108	Bangladesh	4
Indonesia	85	Sri Lanka	1
Singapore	78	Others	3
Taiwan	30	<b>Total</b>	<b>1,162</b>

## Singapore Delegation

The Singapore Productivity Association coordinated 19 teams from Singapore and the 70 man delegation was led by the President of the Association, Dr Ahmad Magad. The Singapore teams received 12 Excellent awards and 7 Distinguished awards collectively. The 19 teams were from the following organizations (in alphabetical order):

- Institute of Technical Education
- Ministry of Defence
- Nanyang Polytechnic
- National Environment Agency
- National University of Singapore
- Singapore Police Force
- Singapore Turf Club
- Land Transport Authority

## Next Three Years

ICQCC over the next three years will be held in:

- 2012 – Kuala Lumpur
- 2013 – Taipei
- 2014 – Colombo

## 9. Team Excellence Symposium Summary Report

### About Innovation and Quality Circles Programme (IQC)

In 2000, Innovation and Quality Circles (IQC) was transformed from Quality Circles and the IQC movement has reached all sectors of the economy.

IQCs are about teams of individual working together to enhance innovation and quality in enterprises. They now have to increasingly focus on innovation as a key factor for business success. Organisations have to increase their innovative capacity and create value to remain competitive and sustain business growth.

Various activities have been implemented to sustain the IQC Movement in Singapore. They include the organising of the National IQC Conventions, now Team Excellence Symposium; International QC Conventions and National IQC Awards.

The Team Excellence Symposium, is a national level convention organised for organisations with IQC to participate. We offer 2 modes of assessment for companies to allow more flexibility for organisations. Organisations can choose to participate in either the In-Company session, also known as the In-House session, where organisations can choose to participate at any time of the year. Organisations can also choose to

participate in the National IQC Convention also known as the Team Excellence Symposium, which occurs twice a year, in March/April and August/September.

### **Team Excellence Symposium August 2011**

In August 2011, IQC teams from organisations from around Singapore participated in the Team Excellence Symposium to not only compete but share their innovation with one another. A total of 98 teams from 21 organisations participated in the August 2011 Team Excellence Symposium and there were a total of \$26 million in cost savings saved by the teams.

Here are the numbers of the respective awards for August 2011:

<b>Star</b>	<b>11</b>
<b>Gold</b>	<b>40</b>
<b>Silver</b>	<b>42</b>
<b>Bronze</b>	<b>5</b>

### **Enhanced Assessment Methodology**

Team Excellence Practitioners have been informed of on-going enhancement to the Assessment Methodology. The purpose of the enhancement is to provide better clarity of criteria requirements and better calibration in assessment.

Briefings for coordinators have been scheduled as follows:

- 24 October 2011 (AM & PM Sessions)
- 28 October 2011 (PM Session)
- 4 November 2011 (AM & PM Sessions)

The new assessment methodology presentation can be access here:

<http://www.spa.org.sg/images/events/downloads/TE%20Aug%202011%20Enhanced%20Assessment%20Presentation%20Slides%20FINAL.PPT>

For more detailed information on the new assessment methodology and the National IQC programmes, please contact the following:

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### UPCOMING NATIONAL IQC CONVENTION

- 20-23 March 2012

## Teams' Contribution to Innovation and Value Creation

Team Projects presented at national convention from March 2007 to September 2011, now called the Team Excellence Symposium



No. of Teams	\$ Savings / Value Created
2355	784.4 million

## Case Study

### Changi General Hospital

At Changi General Hospital (CGH), quality circle is another of the pillars of continuous improvement. It was launched in 1992 and open to all staff in recognition that “the synergy achieved by a team is greater than the efforts of the individuals”. The primary objective of CGH’s quality circle is to improve patient safety, patient satisfaction and staff efficiency. It seeks to provide ample opportunities for all staff to participate in quality improvement within and outside their area of work. CGH believes that for improvement and innovation, their staff is their most valuable resource. The programme fosters teamwork and camaraderie, encourages creativity, innovation and life-long learning. Participants learn improvement tools that they can use in their professional and personal lives, and an improved work process leads to greater effectiveness and improved staff morale.

In 2003, Changi General Hospital introduced a new quality circle (QC) system to enhance its existing QC structure. With the change, staff can choose from three types of projects instead of just one. Two new project types – Quick and In-House projects, were added. The report templates for the two new categories of projects are also much simpler. For instance, staff working on Quick and In-House projects are only required to complete a four to six page report, as compared to 15 pages long for NQCC (National QC Carnival) project reports.

The main purpose of adopting the new framework is to encourage a higher level of staff participation, and to allow staff to effectively focus on doing the projects without having to spend too much time writing the reports. The flexibility of the framework also allows staff to inject creativity and innovation into their projects. Presentations at the In-House Forum can be in any creative form, including skits, PowerPoint presentations, exhibiting the actual product and singing. The new QC system also comes with a new set of rewards. Staff are given credits based on the type of project and the award achieved. The credits accumulated can be exchanged for attractive prizes.

	Maximum number of members*	Report length	Timeframe	Approval for implementation	Presentation
Quick project	5	4 pages	3 months	HOD (Administrator's approval is necessary when cost exceeds \$2,000)	-
In-House project	8	6 pages	6-9 months		In-House Forum (with option of presenting at NQCC)
NQCC project	8	15 pages	6-9 months	Division Administrator	NQCC and/or national convention

\* The number of members includes the leader but not the facilitator.

Two examples of the projects are given below.

### Safer Trolleys for All

An incident involving two nurses who injured their toes while manoeuvring a patient trolley, made a team called the "Special Action Squad" (SAS) embarked on a mission to make patient trolleys safer for staff at CGH. Initial investigations found that the wheels (castors) on the patient trolleys were in good condition, and according to the manufacturer, there was no safety feature to prevent the type of accident that injured the two nurses. However, SAS persisted in finding a solution. Using the In-House project template, the team was able to come up with an efficient and practical solution. The members first brainstormed and developed a few conceptual drawings. They then approached a local welding company to help them in fabricating a safety bracket protector for placing over the castors. Then a trial was conducted. From there, the team modified their drawings based on users' feedback.

The project was presented during the In-House Forum in December 2003. The team is also continuously looking into design enhancements in their relentless pursuit of quality improvement.

### Changing Sheets is Now a Breeze

In line with Changi General Hospital's (CGH) quality vision to "provide a level of patient care and services good enough for our own mothers", a quality circle team called "SPARKS" developed an innovation using the In-House project template.

The team members, who are from the Housekeeping Department, found that the garters of bedsheets tend to lose their elasticity after several washing cycles. When that happens, the bedsheets will either roll to the centre of the beds or come off the mattresses when the beds are raised, causing discomfort to the patients. As the mattress sizes differ, the bedsheets may not fit them neatly. The bedsheets also tend to crease even after ironing due to the gathers around the garters. Furthermore, changing loose garters is a tedious process that can take up a considerable amount of the linen attendants' time.

SPARKS proposed using envelope bedsheets instead and implemented a trial in six wards. The team found that as the flap of the envelope bedsheets is deep, the bedsheets hold the mattress well. Such bedsheets are also more presentable and comfortable. And as they are flat, folding and packing them is easier and neater. The envelope bedsheets were then implemented in phases in all wards, starting from the subsidised wards.



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

Books are available at the Lee  
Kong Chian Reference Library.

## Recommended Readings

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[RSING 658.4036 CHU]

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*Quality control circles at work: Cases from Japan's manufacturing and service sectors*. (1984). Tokyo: Asian Productivity Organization.

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[RSING 658.562 YOU]

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*Losing your edge  
over competitors?*

*Rising costs affecting  
your profitability?*



*Need to expand your output  
while facing cost constraints?*



*Customer complaints  
increasing?*

## We can Help.

### CERTIFIED PRODUCTIVITY PRACTITIONER COURSE

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#### WHY CPP?

- **Enterprise Focused** Targeted at the enterprise with focus on productivity issues and challenges at the enterprise level
- **Diagnostic Approach** Identify strengths and areas of improvement so that actions can be decided easily
- **Technique-based** Teach productivity techniques, tools and methodologies applicable to the enterprise that can be adjusted to suit specific sectors through contextualisation
- **Project Guidance** Participants to undertake productivity project for their own company on a previously identified productivity issue for which project guidance is provided. This ensures that supporting companies benefit from sending staff for the course.

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- Register for next intake; or
- Attend our information session; or
- Arrange for us to visit you

**WDA FUNDING AVAILABLE!\***  
SMEs: 70% of Course Fees  
All other entities: 50% of Course Fees

**Up to 400% of course fees can be claimed under Productivity Innovation Tax Credit!\***

\*Terms & conditions apply.

1. Analyse productivity issue.
2. Develop solutions.
3. Implement improvements.

FOR FULL 2011 SCHEDULE OR MORE INFORMATION, PLEASE CALL 6375 0938 (LEANNE) OR 6375 0940 (ASHTON). ALTERNATIVELY, EMAIL TO: [cpp@spa.org.sg](mailto:cpp@spa.org.sg)

#### 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  
PRODUCTIVITY  
ASSOCIATION

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

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

The schedule of our next runs is as follows:

CPP Schedule:

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		Module 3
Friday, 14 October 2011	9-5 pm	
Wednesday, 19 October 2011	9-5 pm	
Thursday 20 October 2011	Module 4	9-5 pm

January - February 2012		
Date	Module	Time
Wednesday, 11 January 2012	Module 1	9-5 pm
Friday, 13 January 2012	Module 2	9-5 pm
Wednesday, 18 January 2012		9-5 pm
Friday, 20 January 2012		9-5 pm
Wednesday, 25 January 2012	Module 3	9-5 pm
Friday, 27 January 2012		9-5 pm
Wednesday, 1 February 2012		9-5 pm
Friday, 3 February 2012	Module 4	9-5 pm

February - March 2012		
Date	Module	Time
Wednesday, 22 February 2012	Module 1	9-5 pm
Friday, 24 February 2012	Module 2	9-5 pm
Wednesday, 29 February 2012		9-5 pm
Friday, 2 March 2012		9-5 pm
Wednesday, 7 March 2012	Module 3	9-5 pm
Friday, 9 March 2012		9-5 pm
Wednesday, 14 March 2012		9-5 pm
Friday, 16 March 2012	Module 4	9-5 pm

April - May 2012		
Date	Module	Time
Wednesday, 11 April 2012	Module 1	9-5 pm
Friday, 13 April 2012	Module 2	9-5 pm
Wednesday, 18 April 2012		9-5 pm
Friday, 20 April 2012		9-5 pm
Wednesday, 25 April 2012	Module 3	9-5 pm
Friday, 27 April 2012		9-5 pm
Wednesday, 2 May 2012		9-5 pm
Friday, 4 May 2012	Module 4	9-5 pm



May - June 2012		
Date	Module	Time
Wednesday, 30 May 2012	Module 1	9-5 pm
Friday, 1 June 2012	Module 2	9-5 pm
Wednesday, 6 June 2012		9-5 pm
Friday, 8 June 2012		9-5 pm
Wednesday, 13 June 2012	Module 3	9-5 pm
Friday, 15 June 2012		9-5 pm
Wednesday, 20 June 2012		9-5 pm
Friday, 22 June 2012	Module 4	9-5 pm

CPP (Retail) Schedule:

September - October 2011		
Date	Module	Time
Wednesday, 28 September 2011	Module 1	9-5 pm
Thursday, 29 September 2011	Module 2	9-5 pm
Tuesday, 4 October 2011		9-5 pm
Thursday, 6 October 2011		9-5 pm
Tuesday, 11 October 2011	Module 3	9-5 pm
Thursday, 13 October 2011		9-5 pm
Tuesday, 18 October 2011		9-5 pm
Thursday, 20 October 2011	Module 4	9-5 pm

January - February 2012		
Date	Module	Time
Wednesday, 11 January 2012	Module 1	9-5 pm
Friday, 13 January 2012	Module 2	9-5 pm
Wednesday, 18 January 2012		9-5 pm
Friday, 20 January 2012		9-5 pm
Thursday, 26 January 2012	Module 3	9-5 pm
Tuesday, 31 January 2012		9-5 pm
Thursday, 2 February 2012		9-5 pm
Friday, 3 February 2012	Module 4	9-5 pm



February - March 2012		
Date	Module	Time
Wednesday, 22 February 2012	Module 1	9-5 pm
Friday, 24 February 2012	Module 2	9-5 pm
Wednesday, 29 February 2012		9-5 pm
Friday, 2 March 2012		9-5 pm
Tuesday, 6 March 2012	Module 3	9-5 pm
Thursday, 8 March 2012		9-5 pm
Tuesday, 13 March 2012		9-5 pm
Friday, 16 March 2012	Module 4	9-5 pm

April - May 2012		
Date	Module	Time
Wednesday, 11 April 2012	Module 1	9-5 pm
Friday, 13 April 2012	Module 2	9-5 pm
Wednesday, 18 April 2012		9-5 pm
Friday, 20 April 2012		9-5 pm
Tuesday, 24 April 2012	Module 3	9-5 pm
Thursday, 26 April 2012		9-5 pm
Thursday, 3 May 2012		9-5 pm
Friday, 4 May 2012	Module 4	9-5 pm

May - June 2012		
Date	Module	Time
Wednesday, 30 May 2012	Module 1	9-5 pm
Friday, 1 June 2012	Module 2	9-5 pm
Wednesday, 6 June 2012		9-5 pm
Friday, 8 June 2012		9-5 pm
Tuesday, 12 June 2012	Module 3	9-5 pm
Thursday, 14 June 2012		9-5 pm
Tuesday, 19 June 2012		9-5 pm
Friday, 22 June 2012	Module 4	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 businesses 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 organisations 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 businesses 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 businesses in improving productivity, quality control and business excellence, including organisations 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. One 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](mailto:CPP@spa.org.sg).***

***Alternatively, you could also contact our secretariat:***

***Ms. Leanne Hwee***

***Mr. Ashton Chionh***

***DID: 6375 0938***

***DID: 6375 0940***