Productivity Link

Contents

Business Analytics

1. Introduction

Organisations are awash in information. However, they often lack in tools, methods and talent for using the information, particularly those that are most important facets of their business – customers, processes, employees, and competition. This information is gathered but not analysed, reported but not understood, and guessed about, rather than acted upon.

Business analytics is the emerging and growing technology that organisations are embracing. They can capitalise on business analytics to make the most of the information they have in hand. Business analytics is used to gain insights that inform business decisions. It can be used to automate and optimise business processes. Data is often treated as a corporate asset for data-driven companies and they leveraged on it for competitive advantage.

2. What is Business Analytics?

Business analytics involves "using sophisticated technology to bring data together and using sophisticated algorithms to filter and analyse that data". The results can include deep understanding of the workings of the business and its connections to the marketplace, key performance indicators to drive business decisions and dramatic improvements in the performance of business processes.

Business analytics is used by organisations that are committed to data-driven decision making apart from gaining insights and drive business planning. Successful business analytics depends on data quality, skilled analysts who understand the technologies, and the business and an organisational commitment to data-driven decision making.

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3. Business Analytics vs Business Intelligence

The terms business analytics and business intelligence are often used interchangeably. However, there are some key differences.

	Business Intelligence	Business Analytics
Answers the questions:	What happened? When? Who? How many?	Why did it happen? Will it happen again? What will happen if we change *x*? What else does the data tell us that we never thought to ask?
Includes:	Reporting (KPIs, metrics) Automated monitoring / alerting (thresholds) Dashboards Scorecards OLAP (Cubes, slice & dice, drilling) Ad hoc query	Statistical / quantitative analysis Data mining Predictive modelling Multivariate testing

Source: Business analytics. (n.d.). Retrieved March 4, 2013, from http://searchbusinessanalytics.techtarget.com/definition/business-analytics-BA

4. How Does Business Analytics Benefit the Organisation?

In 2010, a survey by the MIT Sloan Management Review and the IBM Institute for Business Value revealed that analytics-driven organisations see greater success in the market. These companies have "the ability to get a clear view of the situation from a common, connected source

of information". Thus, they could anticipate and shape business outcomes to consistently outperform their competitors.

The research also shows the value of applying business analytics to improve business outcomes. Companies that have done so were no longer focussed on answering "what is my hardest problem". Instead, they are asking "what is our greatest possibility?". This drives them forward while their competitors are left to wrestle with difficult issues. They are able to see patterns, correlations and outliers in data of all kinds, understand the history and context of events and outcomes and anticipate changes to come. The leaders achieved growth, competitive differentiation and cost management by making good choices. They also have the knowledge they needed to make the best decisions about what markets to pursue, how to configure and price offerings and how to make operations more effective and efficient.

Hence, the key benefits of business analytics are:

- Improving the decision-making process

- Speeding up the decision-making process

- Better alignment of resources with strategies

- Realising cost efficiencies

- Responding to user needs for availability of data on a timely basis

- Improving organisation's competitiveness

5. Challenges to Overcome

Putting analytics to work effectively in an organisation can be an overwhelming challenge.

Some of the most common reasons why analytics initiatives fail to make forward progress include:

- Lack of executive sponsorship
  The failure of senior executives to recognise the importance of analytics and resource and empower the analytics function appropriately will result in the eventual failure of the analytics implementation.

- Lack of analytics leadership
  Team leaders who have neither effectively communicated nor driven strategic analytics projects based on the value of analytics will see their analytics implementation wither and slowly lose momentum.

- Lack of a clear implementation strategy
  Despite great analytic ideas and solutions, analytics implementation will eventually fail if there is no strategy to put analytics into action across the organisation.

- Lack of support
  Analytics implementation needs the support of end users, internal customers and other stakeholders. They need to understand the value of analytics.

- Lack of customer experience excellence
  An analytics solution cannot be developed without thinking deeply about the customer experience. Unless customers have been involved throughout the process, it will be hard to get them committed to using the analytics solutions or insights that have been developed.

- Lack of collaboration across organisational groups
  Analytics initiatives are everyone's business. Hence, if the analytics solutions do not involve multiple functional groups, they are less likely to succeed.

- Lack of integrated processes
  Analytics implementation will be much more challenging if information and knowledge are scattered in silos across the organisation.

- Lack of skilled and focussed human capital
  The lack of team skills and bandwidth to execute and the failure to prioritise effectively will disrupt the analytics implementation.

- Lack of measurement or metrics to track outcomes
  The outcome key performance indicators (KPIs) should drive the analytics plan and implementation. If outcome KPIs are not clear, the implementation might lead to missed opportunities.

Here are the four key challenges to address:

(i) Strategic alignment
Most organisations today already have some element of business analytics in place, often in the business intelligence or data warehousing area. Unfortunately analytics are often viewed by top executives as "esoteric research" at best, and "irrelevant fringe experiments" at worst. The issue surrounds not a lack of appreciation for the usefulness of information but a lack of alignment, availability and trust.

It is recommended that organisations review their business goals that support their main organisational strategies. For each major business process that underpins the goals, ask the following questions:

- "Would we be able to govern and optimise this process more effectively if we could predict how modifications to it would affect the result?"

- "Would we be able to adapt the process more readily to changes in the external environment if we could more accurately assess the nature and causes of those changes?"

If the answers to either of those questions is "yes", then the process (and therefore the goal it underpins, and the strategy the goal supports) would benefit from the application of analytics.

(ii) Agility
Typically in the organisations, the analysts are organised by business domains. However, findings from working with top-tier, information-driven organisations demonstrate that domain-based organisations are not the most effective approach for analytics. Analysts often work independently and create models in ad-hoc environments based on a patchwork of extracts and sources. The results, while advanced and valid, are not easily communicated to the business users for whom they would provide the greatest value.

It is recommended that the organisation's analytical capabilities are liberated by pooling analysts into a "Centre of Excellence" (CoE) highly focused on "analytics-as-a-skill". Combine members of the CoE with business domain experts into teams who employ agile methods for development of analytical models, enabling the business users to gain real- or

right-time insight into complex, data-demanding questions.

(iii) Commitment

Analytics software packages often come as pre-fabricated solution and are not particularly difficult to implement; however they can be costly, and the ROI is not immediate. By their nature, analytical models will improve in accuracy over time as the predicted results are compared with actual events hitting the warehouse. But this is a complex endeavour that requires dedication to the solution during an extended tuning period. Here is where many deployments fail. Business users do not immediately see the promised results and lose interest, and executives lose trust in the solution and refuse to rely on what the models tell them.

By addressing the first challenge, stakeholders in analytics will naturally be identified (the process and goal owners). These business owners must take responsibility for establishing the productive analytics environment described in the second key challenge mentioned above. Realistic timelines that allow the models to take form should be set based on industry standard and best practice.

(iv) Information maturity

Implementations often fail because of the lack or low quality of underlying transactional data. Either data are not available, data sources are too complex, or data are poorly mastered. Even bleeding-edge, sentiment and context-analysis tools require some level of trust in the data, and for any analytical model the rule is consistent: the more trustworthy the data the more trustworthy the result.

Organisations must perform a maturity assessment on the company's information architecture. Identify data sources based on a mapping to analytical requirements; measure the quality of both operational information (transactional data) and aggregated information in the warehouse; and review the existing integration infrastructure's ability to support new sources and data conduits.

6. Types of Business Analytics

There are three types of business analytics:

(i) Prescriptive analytics – Used when an output target is known and it is required to find the values of the input parameters which would impact that output so as to reach that targeted output.

(ii) Descriptive analytics – Refer to viewing data in different forms for instant consumption. The different forms could be: standard reports, scorecards, dashboards, e-mail notifications or alerts. The purpose of descriptive analytics is to report the information captured in the past.

(iii) Predictive analytics – Use mathematical models to forecast the future.

	Descriptive Analytics	Predictive Analytics	Prescriptive Analytics
What is it?	Looks at historical data to find reasons for success or failure.	Helps model and forecast what might happen, i.e. predicting future outcomes.	Goes beyond predicting future outcomes by helping decide the best course of action given corporate objectives and budget constraints.
What types of data are used?	Statistics used may include mean, standard deviation, minimum values, etc.	Historical performance data such as sales, number of Facebook likes received in the past 30 days are combined with rules and algorithms to determine possible future	Internal data as well as external data can be used for stochastic optimisation or simulation models. Taking into account the impact of decisions made, the approach tries to predict

	outcomes.		different outcomes based on alternate variables.
What types of statistics are used to analyse these data?	Descriptive statistics describe what data show, i.e. what is. Inferential statistics are used to infer a population's preferences from sample data.	Inferential statistics allow for judging the probability that an observed difference between group A and B is dependable (i.e. generalise for the population based on the sample's finding).	Decision modelling is used in addition to the predominant inferential statistics.

Source: Business analytics: Best practices for success. (2012, October 3). Retrieved March 4, 2013, from http://smartdatacollective.com/commetrics/75831/business-analytics-best-practices-success

7. Eight Essential Steps

Organisations can identify their most profitable customers, accelerate product innovation, optimise supply chains and pricing, and identify the true drivers of financial performance by embracing a business analytical approach.

The following are eight key actions that can be undertaken.

7.1. Improve the flow and flexibility of data

Organisations must ensure that high quality data is integrated and accessible across the organisation. It should also be structured in a flexible way that allows the analysts to discover new insights and provide leaders the information they need to adjust strategies quickly. Strengthening and flexing the data backbone of the enterprise will pay off when there is a need to change business processes

quickly in response to market shifts, regulatory or stakeholder demands.

7.2. Get the right technology in place

Organisations are urged to take an enterprise approach to data management and analytics to effect better decisions. Remove disconnected silos of data, technology or expertise. The organisation's technology portfolio should include:

- Optimised data stores to support core business processes and discovery.

- Data integration and data quality software.

- Analytical software with the means to effectively deploy, explore and share results in a meaningful way.

- Integrated analytical applications designed to solve defined issues quickly.

When selecting technologies, consider "risk-to-value": Can the technology be applied to help reduce costs and increase revenue? Also it is important to note that getting the right technology in place does not have to involve a complete overhaul.

7.3. Develop the talent needed

Develop or recruit analytic thinkers who seek and explore the right data to make discoveries. In order to make analytics work, analysts must be able to communicate effectively with leaders and link analytics to key decisions and the bottom line.

7.4. Demand fact-based decisions

An analytical organisation makes a wide range of decisions. While some are ad hoc, there are others that are automated or transformative. Managers are encouraged to ask the right questions of the data to get maximum insight. How results are deployed is also crucial – through operation systems such as customer relationship management applications or real-time fraud applications to interactive dashboards, data movies, in databases – wherever needed to ensure decision makers have the information they

need when the need it, as well as in the way they can best consume it.

7.5. Keep the process transparent

Transparency implies openness, communication and accountability. It is key to successful business analytics projects. The value delivered from an investment in business analytics must be visible and measurable. Who the analysts are, and what they are seeking to accomplish should be clearly communicated to the organisation, as should their findings.

7.6. Develop an analytical centre of excellence

Create a centralised team approach – an analytical centre of excellence (ACE) – which promotes the use of analytics and associated best practices. The implementation of an ACE will depend on the organisation's maturity and requirements, but the most effective implementations address all elements of the organisation's analytic infrastructure: people, process, technology and culture to support the organisation's strategy and operations.

7.7. Transform the culture

A strong analytical culture has executive sponsorship and encourages creativity. Experimentation should be seen as part of learning, and employees should be given permission to fail as they learn from trying new things.

7.8. Revise the strategies – often

The competitors will often duplicate the organisation's analytical initiatives. Staying ahead requires continuous review of strategy and development of new skills and capabilities.

Case Study

Zara

Zara is a Spanish clothing manufacturer and retailer. This world's leading fashion retailer is the flagship chain of the Inditex Group. Often, the term "fast fashion" is associated with the company which has rapidly sped up the process of designing and delivering fashionable clothes throughout the world. Its business model involves "frequent in-season assortment changes and ever-trendy items offered in appealing store environments at competitive prices".

The Problem

In order to support their customer value proposition, the company has developed an innovative and highly responsive design, production and distribution infrastructure. Their business model is powered by continuous cycle involving flows from stores to designers, from designers to suppliers, from suppliers to warehouses and from warehouses to stores. Zara's supply chain comprises two primary warehouses located in Spain. These warehouses periodically receive shipments of finished clothes from suppliers and ship replenishment inventory directly to every Zara store in the world twice a week. A key associated challenge is to determine the exact number of units of each size (up to eight) of each article (up to 3,000 at any time) that should be in each shipment to each store (more than 1,500).

This problem is critical as its solution determines the "bloodstream" of Zara's merchandise to its stores. It is challenging as:

- the number of associated shipment decisions reaches several millions;

- the amount of relevant data (warehouse inventory, store inventory, and store sales history for each article) is also enormous;

- the available warehouse inventory is often limited;

- most stores will only sell merchandise when the set of available sizes is complete enough (introducing complex dependencies across sizes); and

- these decisions must be made in just a few hours.

The Analytical Solution

In 2005, the process used by Zara for determining shipments involved the examination by a large team of warehouse employees of shipment requests sent by every store, which presented an opportunity to improve both scalability and revenues.

The Zara team started to develop an alternative decision process relying on proven analytical methods, including forecasting algorithms, stochastic analysis, and a large-scale mixed-integer programming model.

Legacy Process
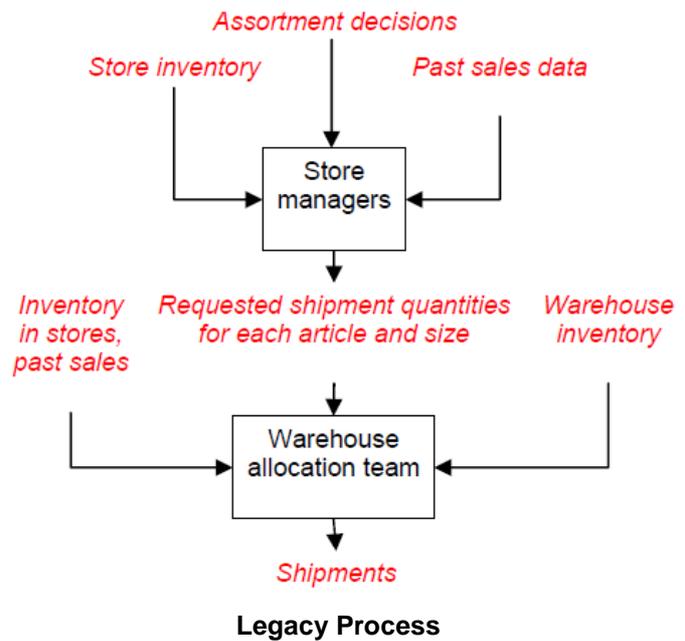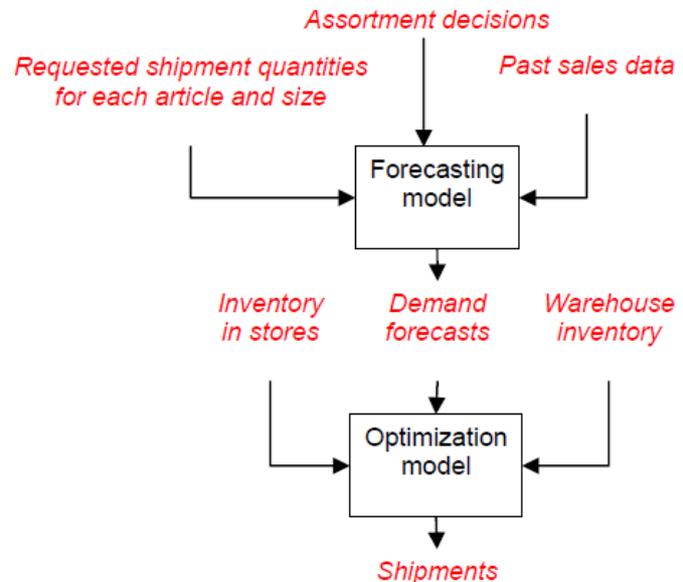
New Process

Source: Caro, F., et. al. (2009, August 3). Zara uses operations research to reengineer its global distribution process. Retrieved March 4, 2013, from http://faculty.smcm.edu/acjamieson/f12/ZaraInterfacesPaperAugust3.pdf

As seen in the figure above, the new structure of the new process comprises two key steps: the forecasting model and optimisation model. At a high-level, it consists of using the shipment requests from store managers along with past historical sales to build demand forecasts. It then uses these forecasts, the inventory of each article and size remaining both in the warehouse and each store, and the assortment decisions as inputs to an optimisation model having shipment quantities as its main decision variables and the maximisation of global sales as its objective.

The implementation of the new process presented many technical difficulties, including the need to capture forecast uncertainty and store-level inventory policies, the live integration of a complex mathematical model with many large databases, and the development of the software and hardware infrastructure necessary to solve thousands of optimisation problems in just a couple of hours every day. It also presented human challenges, as Zara's culture greatly values human judgment and intuition for decision making.

The Value

In June 2007, Zara completed the deployment of this new process supported by analytics to all its stores and items sold

worldwide. It has since been using it continuously. Before full-scale deployment, Zara conducted a controlled pilot field experiment involving a limited number of articles and half of its stores worldwide to test this new analytics-based process. That experiment showed, with a high level of rigor, that the new process increased in-season sales by a conservative estimate of 3%-4%, reduced transhipments between stores, and increased the time many articles spent in store displays.

From the sales impact alone, the realised financial benefits is estimated, as of late December 2008, at about US$233 million (2007) and US$353 million (2008) in additional revenue or US$28 million (2007) and US$42.4 million (2008) in additional net income, with both measures of impact predicted to grow at a rate of 13% per annum in subsequent years. On the cost side, Zara was able to maintain its warehouse inventory allocation team at its early 2007 staffing level of 60 individuals worldwide, even though it was initially planning on expanding that team proportionally to sales growth. The optimisation model has also had a significant impact on the daily lives of these employees: they have all become enthusiastic users of the new tool, gratefully seeing their responsibility shift from repetitive manual data entry to exception handling, scenario analysis, and process improvement.

Recommended Readings

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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[RBUS 658.4038 ISS]

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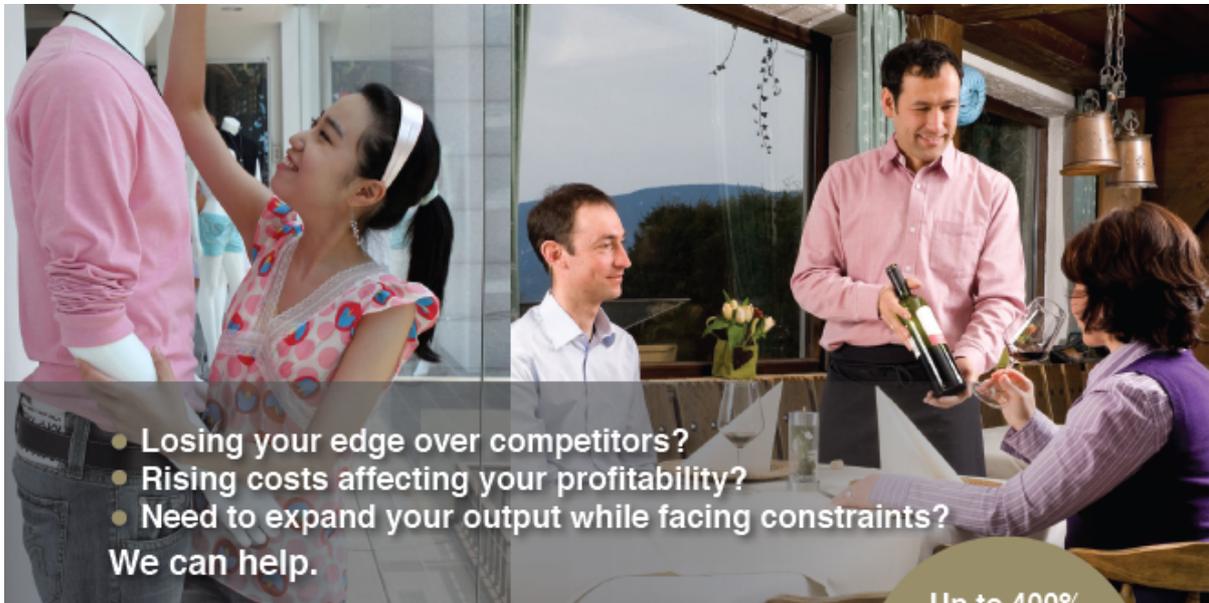
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For full 2012 Schedule or more information, please call **6375 0938 (Angela)** or **6375 0934 (Jeslyn)**. Alternatively, email to: **cpp@spa.org.sg**

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.

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CPP Course Syllabus	
CPP	**CPP (Retail)**
Module 1: Understanding Productivity **(Duration: 1 day)** • Introduction to Productivity and Quality Concepts • Factors Affecting Enterprise Productivity • Productivity Movement in Singapore • Productivity Promotion in Businesses • Productivity Challenges	
Module 2: Productivity Tools, Techniques & **Management Systems** **(Duration: 3 days)** • Business Excellence • Productivity Measurement & Analysis • Process management: ▪ Cost of Quality ▪ Lean Six Sigma ▪ Process Mapping & Analysis • Integrated Management Systems	**Module 2: Productivity Tools, Techniques &** **Management Systems** **(Duration: 3 days)** • Delivering Service Excellence • Productivity Measurement & Analysis • Process management: ▪ Cost of Quality ▪ Lean Six Sigma ▪ Process Mapping & Analysis
Module 3: Innovation & Service Excellence **(Duration: 3 days)** • Knowledge Economy & Innovation • Service Excellence • Team Excellence	**Module 3: Innovation & Service Excellence** **(Duration: 3 days)** • 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
Module 4: Critical Success Factors **(Duration: 1 day)** • 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	

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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

CPP Generic 2013:

January 2013		
Date	**Module**	**Time**
Wednesday, 9 January 2013	Module 1	9-5 pm
Friday, 11 January 2013	Module 2	9-5 pm
Wednesday, 16 January 2013		9-5 pm
Friday, 18 January 2013		9-5 pm
Wednesday, 23 January 2013	Module 3	9-5 pm
Friday, 25 January 2013		9-5 pm
Wednesday, 30 January 2013		9-5 pm
Friday, 1 February 2013	Module 4	9-5 pm

February 2013		
Date	**Module**	**Time**
Wednesday, 13 February 2013	Module 1	9-5 pm
Friday, 15 February 2013		9-5 pm
Wednesday, 20 February 2013	Module 2	9-5 pm
Friday, 22 February 2013		9-5 pm
Wednesday, 27 February 2013		9-5 pm
Friday, 1 March 2013	Module 3	9-5 pm
Wednesday, 6 March 2013		9-5 pm
Friday, 8 March 2013	Module 4	9-5 pm

March - April 2013		
Date	**Module**	**Time**
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Friday, 3 April 2013		9-5 pm
Wednesday, 5 April 2013		9-5 pm
Friday, 10 April 2013	Module 3	9-5 pm
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CPP Retail 2013:

January 2013		
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CPP Food Services 2013:

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Monday, 21 January 2013	Module 3	9-5 pm
Tuesday, 22 January 2013		9-5 pm
Tuesday, 29 January 2013		9-5 pm

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Friday, 1 February 2013	Module 4	9-5 pm

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Monday, 25 February 2013	Module 3	9-5 pm
Tuesday, 26 February 2013		9-5 pm
Tuesday,5 March 2013		9-5 pm
Friday, 8 March 2013	Module 4	9-5 pm

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Friday, 3 April 2013		9-5 pm
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Tuesday, 9 April 2013		9-5 pm
Tuesday, 16 April 2013		9-5 pm
Friday, 19 April 2013	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 ADMINSITRATION (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.
Alternatively, you could also contact our secretariat:
Ms. Angela Poh
DID: 6375 0938