



# 2016 Lean and Six Sigma Training Guide



**2KO International – Six Sigma South Africa**

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2KO International – Six Sigma South Africa is the leading Six Sigma Training provider for many of the largest companies in South Africa, as well as neighboring African countries.

Choosing the correct training provider is crucial in a successful Six Sigma/Lean process. At 2KO International we work closely together with companies to assist them according to their specific training needs.

**1. Results that your company can expect:**

- Improved Customer Service Loyalty
- Time Management and efficiency
- Reduced Cycle Time
- Employee Motivation
- Strategic Planning
- Supply Chain Management
- Bottom line cost savings (5%-20% of turnover per annum)
- Improved quality of product or service as perceived by the customer (internal and external customers)
- Reduction in process cycle times
- Development of staff skills
- Common language throughout the organisation
- World class standard
- Creates a competitive edge
- Improve ROI
- Drive sales growth

**2. What can you expect**

- Improved knowledge and skills
- Ability to use a wide range of tools and techniques
- A status that is recognised world wide

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**3. Why choose 2KO as your Training Provider?**

- 2KO International has prompt response time in addressing the needs of your company
- 2KO International provides 2 sets of certification, once students have successfully completed the training and the project.
- Worldwide, the practice is that Six Sigma/Lean certification is awarded by an institution that employs a certified and qualified six sigma/Lean black belt trainer (which is what we do). There is no central certifying body like there is for say Microsoft. For this reason six sigma/lean certification is recognized worldwide provided it came from a certified organization.
- 2KO International provides a flexible training schedule to suit delegates
- 2KO International offers training in Johannesburg as well as onsite elsewhere in the world
- 2KO International is well-established

**4. Some of the companies we've trained in 2015:**

- Standard bank
- SAPPI
- SARS
- Chevron
- Anglo American
- Toyota
- ABSA
- Nedbank
- Transnet
- SCAW
- Denel
- Valve
- SA Airports
- SGS
- John Deere
- Aspen Pharmacy
- FNB
- Alstom
- Petra diamonds
- World Net Logistics
- And Many More

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## 5. Difference between LEAN and DMAIC

### Lean Six Sigma:

**Goal:** Reduction of waste in all of its forms throughout the operation

**Method:** Set operation to order using 5S and visual factory; identify where in the material and information flows waste exist and eliminate it.

**Measure:** Operational costs.

**Industry:** Manufacturing

### DMAIC Six Sigma:

**Goal:** Reduction of variation in all processes of the operation

**Method:** Search for differences in performance between groups, within groups, and over time to identify primary contributions of variation; develop additional understanding of multivariate causes by studying relationships between process inputs and outputs; put controls in place to minimize the contribution of input variation on output variation.

**Measures:** Variance, standard deviation, Process Capability (Cp and Cpk), sigma value, operational costs.

**Industry:** Process environments

## 6. Difference between the different belts

### Yellow Belt Training:

The most basic level that covers the understanding of the Six Sigma style.

**Role:** The employee will be part of a project team where he will review process improvements that support the project

### Green Belt Training:

During the course, the delegate will learn the tips and techniques that make for a good six sigma execution, and receive fundamental training in Define, Measure, Analyze, Improve and Control.

**Role:** People with this certification are often referred to as worker bees because they do the majority of the work during projects. They gather the necessary information, experiments and tests throughout the project.



### Black Belt Training:

Focus on additional training in deeper analysis tools (think stats) and perhaps even some instruction on change management or stakeholder influence.

**Role:** These are the people who are in charge of the Six Sigma Projects within their respective companies. Most of the time, these are the people who are asked to take on this task on a full time basis. Along with heading the project, they also are expected to coach, develop and advise other managers so the entire company can achieve this goal. Leads problem-solving projects. Trains and coaches project teams.

### Master Black Belt Training:

This is the highest of the Six Sigma belts one can achieve. Focus on Change Management techniques.

**Role:** The master black belt will make sure everything continues running smoothly and all the training the company learned stays in the company. They are there to execute the practices throughout the company, not just within the project. A Six Sigma master black belt course is all the above, plus will have mentored or coached about 20 or more green belts and black belts, has more developed statistical and analysis skills, plus is well versed in change management techniques. Trains and coaches Six Sigma Black Belts and Green Belts. Functions more at the Six Sigma program level by developing key metrics and the strategic direction. Acts as an organization's Six Sigma technologist and internal consultant.



7. Courses and outlines:

a. Six Sigma Yellow Belt Certification:

Six Sigma Yellow Belt certification provides an overall insight into the techniques of Six Sigma, its metrics, and basic improvement methodologies. A yellow belt must know how to integrate Six Sigma methodologies for the improvement of production and transactional systems to better meet customer expectations and bottom-line objectives of their organization. A Yellow Belt typically has a basic knowledge of Six Sigma, but does not lead projects on their own. The Yellow Belt is needed to gather data, participate in problem solving, and add their expertise to the exploration process.

Day 1	Day2
<ul style="list-style-type: none"> <li>• Introductions</li> <li>• Six Sigma Fundamentals</li> <li>• Six Sigma Roles</li> <li>• Voice of the Customer</li> <li>• The Six Sigma framework</li> </ul>	Basic overview of: <ul style="list-style-type: none"> <li>• Define</li> <li>• Measure</li> <li>• Analyze</li> <li>• Improve</li> <li>• Control</li> </ul>

**Course Duration** 2 Days (8:45 -16:00)

**Cost:** R6500 per person

Course only runs for a group of 7 or more delegates.

**IASSC Accredited training provider:** The International Association for Six Sigma Certification (IASSC) is a Professional Association dedicated to growing and enhancing the standards within the Lean Six Sigma Community.

<http://www.iassc.org/>

**MICT SETA Accreditation:** 2007/01/215

**Unit Standard:** 243816 | Developing a project quality management plan for a simple to moderately complex project | Level 5



b. Six Sigma DMAIC Green Belt Certification:

Six Sigma Green Belt courses prepare candidates for Greenbelt Certification on DMAIC principles. Green Belt requires candidates to demonstrate a skill set which includes starting and completing projects and using a data-based approach to solving practical problems.

*Who Should Attend Six Sigma Green Belt?*

Process engineers and managers, Quality Engineers and managers, Manufacturing/Production engineers and managers, Service Process Improvement personnel, Customer Service Officers, etc.

Introduction:	Define and Measure Phase:
<ul style="list-style-type: none"> <li>• Course Logistics (rules, program layout, expectations)</li> <li>• What is Six Sigma? (introductory overview)</li> <li>• Project Selection</li> <li>• Project Planning and Charters</li> <li>• Internal Process Measures</li> <li>• Introduction to DMAIC project management</li> </ul>	<ul style="list-style-type: none"> <li>• Basic Statistical Concepts</li> <li>• Control Charts</li> <li>• The Define Phase</li> <li>• Process Mapping</li> <li>• Measuring System Analysis</li> <li>• Process Capability Analysis</li> </ul>
Analyze Phase:	Control Phase;
<ul style="list-style-type: none"> <li>• Root Cause Problem Solving Tools</li> <li>• Basic Experimental Design (Hypothesis Testing)</li> <li>• Linear Regression</li> <li>• Introduction to DOE</li> <li>• The Improve Phase</li> </ul>	<ul style="list-style-type: none"> <li>• The Control Phase</li> <li>• Basic Cost Benefit Analysis</li> <li>• The Control Plan Strategy</li> <li>• Error proofing</li> <li>• Levels of Control</li> <li>• Review and Wrap-up</li> </ul>

**Course Duration:** 5 days (8:45 – 15:30) on the Friday you write an exam that you need to pass before you can complete the project.

**Project Durations:** 3 months to complete the project

**Total Cost:** R18 995 per person

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**Venue:** Sandton Lodge Rivonia – Johannesburg

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**MICT SETA Accreditation:** 2007/01/215

**Unit Standard:** 243816 | Developing a project quality management plan for a simple to moderately complex project | Level 5



c. Six Sigma DMAIC Black Belt Certification:

The DMAIC Six Sigma Black Belt course provides you with knowledge of the philosophies and principles of Six Sigma. It is a tool that helps you to exhibit teams (leadership, dynamics, responsibilities and roles). The Black Belt provides you with complete understanding of the DMAIC model in according with the Six Sigma principles.

*Who Should Attend?*

Process engineers and managers, Quality Engineers and managers, Manufacturing/Production engineers and managers etc.

Introduction	Measurement System Analysis
<ul style="list-style-type: none"> <li>• Course Logistics (program layout, expectations, etc.)</li> <li>• Six Sigma Introductory Overview</li> <li>• Project Selection</li> <li>• Process and Financial Metrics</li> <li>• Project Reporting Expectations</li> <li>• PDCA (Plan Do Check Adjust)</li> </ul>	<ul style="list-style-type: none"> <li>• Variable Gage R&amp;R</li> <li>• Attribute Agreement Analysis</li> <li>• Variables Data Capability Analysis</li> <li>• Attribute Agreement Analysis</li> </ul>
Project Definition	Basic Statistics
<ul style="list-style-type: none"> <li>• Project Charters</li> <li>• Estimating Financial Metrics</li> <li>• Definition of process outputs (characteristics, defects, defectives)</li> <li>• Process Mapping</li> <li>• Strategic Alignment With Project Selection</li> <li>• Project Selection Facilitation</li> </ul>	<ul style="list-style-type: none"> <li>• Fundamental Statistical Measures</li> <li>• Control Charts</li> <li>• Common and Special Cause Improvement Strategies</li> <li>• Introduction to Minitab</li> <li>• Quality Tools</li> <li>• Introduction to Hypothesis Testing</li> <li>• 1 proportion Tests and 2 proportion Tests</li> <li>• Chi Square Testing</li> <li>• T Tests</li> <li>• ANOVA</li> <li>• Correlation Analysis</li> <li>• Single Regression</li> </ul>



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	<ul style="list-style-type: none"> <li>• Normality and Distributions</li> <li>• Anderson-Darling Test for Normality</li> </ul>
<b>Design of Experiments (DOE)</b>	<b>Improve and Control</b>
<ul style="list-style-type: none"> <li>• Introduction to Design of Experiments</li> <li>• Non Parametric tests and analysis</li> <li>• General Full Factorial Designs</li> <li>• Two-Level Factorial Designs</li> <li>• Three-Level Factorial Designs</li> <li>• Post-hoc Analysis</li> <li>• Fractional Factorials</li> </ul>	<ul style="list-style-type: none"> <li>• Solution Selection and Prioritization</li> <li>• Pilot Studies (assessing countermeasures)</li> <li>• Final Capability Analysis</li> <li>• Process Controls</li> <li>• Wrap-Up</li> </ul>

**Course Duration:** 10 non consecutive days (full time)

On each Friday you write an exam that you need to pass before you can complete the project.

**Project durations:** maximum of 6 Months

**Total Cost:** R32 000 per person

**Venue:** Sandton Lodge Rivonia – Johannesburg

**IASSC Accredited training provider:** The International Association for Six Sigma Certification (IASSC) is a Professional Association dedicated to growing and enhancing the standards within the Lean Six Sigma Community.

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d. Six Sigma and Lean Principles:

This course is targeted at delegates that would like an overview of both Lean and Six Sigma core principles. Delegates will then decide whether to go the Six Sigma route or the Lean route.

**Course outline:**

- Change Management
- Define Phase - VOC, SIPOC, Process Map, CCR
- Measure Phase – Indicators, Data, Examples, MSA
- Analyze Phase – Statistics, Ishikawa, C&E, Root Causes
- Improve Phase - Evaluation & Selection, To be Process Map, Presentation
- Control Phase - Scheduling, RACI, PCS & Documentation
- Lean - Kaizen, RIW, Spaghetti Map, VSM, 5S, 8 Waste

**Course Duration:** 5 days (8:45 -16:00)

**Total Cost:** R12 995 per person  
The course is not based on a Project therefore delegates will only receive a certificate of attendance

**Venue:** Sandton Lodge Rivonia – Johannesburg

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e. Lean Six Sigma Green Belt:

Green Belts play an important role in your company’s Lean Six Sigma implementation strategy. They are the problem solvers assigned to Black Belt projects. Learn how to apply the right tools at the right time to maximize efficiency in defining, measuring, analyzing, improving, and controlling critical processes to increase cost savings.

*Who Should Attend?*

Problem solvers, data analysts, and project team members in manufacturing and service industries. Individuals seeking to bring significant cost savings to their organization and those interested in becoming a Six Sigma Green Belt and/or sitting for the ASQ Six Sigma Green Belt certification exam will benefit from this training.

<b>Introduction</b>	<b>Control phase</b>
<ul style="list-style-type: none"> <li>• Lean Six Sigma Definitions</li> <li>• Understanding Six Sigma</li> <li>• Understanding Lean Principles</li> <li>• Understanding Losses Attributable to “Waste”</li> <li>• Interrelationship of Lean Six Sigma</li> <li>• Six Sigma Fundamentals</li> </ul>	<ul style="list-style-type: none"> <li>• Principles of Statistical Process Control</li> <li>• Process Capability</li> <li>• Error Proofing</li> <li>• Reliability &amp; Asset Utilization</li> <li>• Standardized Work</li> <li>• Pull Systems</li> <li>• Understand the 5 phases of the Control Plan</li> </ul>
<b>The Define Phase</b>	<b>The Measure Phase (Measurement System Analysis)</b>
<ul style="list-style-type: none"> <li>• Selecting an Output Characteristic (“Y”)</li> <li>• Defining Performance Standards</li> <li>• Describing the Process</li> <li>• Value Stream Mapping</li> <li>• Swim Lane Mapping</li> <li>• Project Charters</li> <li>• Cost of Poor Quality</li> <li>• Understanding Basic Statistics</li> </ul>	<ul style="list-style-type: none"> <li>• Variable Gage R&amp;R</li> <li>• Attribute Agreement Analysis</li> <li>• Variables Data Capability Analysis</li> <li>• Attribute Data Capability Analysis</li> <li>• Process Discovery</li> <li>• Six Sigma Statistics</li> <li>• Measurement System Analysis</li> <li>• Process Capability</li> </ul>
<b>The Analyse Phase</b>	<b>The Improve Phase</b>
<ul style="list-style-type: none"> <li>• Identification of Potential Causes</li> <li>• Hypothesis Testing</li> <li>• Chi-Square &amp; ANOVA</li> <li>• Correlation Analysis</li> <li>• Regression Analysis</li> <li>• Basic Design of Experiments</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing Operating Tolerances</li> <li>• Re-evaluating the measurement system</li> <li>• Total Productive Maintenance</li> <li>• Cellular Manufacturing</li> <li>• 5S – Visual Management</li> <li>• Process Modelling Regression</li> </ul>

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<ul style="list-style-type: none"> <li>• Quick Changeover (SMED)</li> <li>• Inferential Statistics</li> </ul>	<ul style="list-style-type: none"> <li>• Designing Experiments</li> </ul>
<b>Kaizen</b>	
<ul style="list-style-type: none"> <li>• Developing the Action Plan</li> <li>• Kaizen Outcomes</li> <li>• Project Background and Description of Exercise</li> </ul>	

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**Project durations:** 3 months to complete the project

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f. Lean Six Sigma Black Belt Certification

Black Belts play an important role in your company’s Six Sigma implementation strategy. They lead the efforts to breakthrough improvement. This program combines Six Sigma’s DMAIC methodology and quality tools with the power of lean manufacturing. Learn how to apply the right tools at the right time to maximize efficiency in defining, measuring, analyzing, improving, and controlling critical processes to improve business performance.

Who Should Attend?

Team Leaders/Potential Team Leaders of Lean Six Sigma Efforts, Manufacturing/Industrial Engineers

Outline	Problem Solving Process & Tools
<ul style="list-style-type: none"> <li>➤ Lean Black Belt Principles and Overview</li> <li>➤ 7 Wastes (MUDA)</li> <li>➤ Kaizen Pre-Event Planning</li> <li>➤ Kaizen Blitz</li> <li>➤ Brainstorming Techniques</li> <li>➤ Cell Design &amp; Factory Layout</li> <li>➤ 5S &amp; SMED</li> <li>➤ Poke Yoke</li> <li>➤ Lean Office</li> <li>➤ Introduction to Six Sigma (DMAIC methodology)</li> <li>➤ Introduction to Change Management</li> </ul>	<ul style="list-style-type: none"> <li>➤ Cause &amp; Effect Diagrams</li> <li>➤ Plan, Do, Check, Act (PDCA)</li> <li>➤ 5 Why</li> <li>➤ Pareto Analysis (80/20rule)</li> </ul>
Total Productive Maintenance (TPM)	Standard Operations
<ul style="list-style-type: none"> <li>➤ Planned maintenance</li> <li>➤ Education and Training</li> <li>➤ Equipment improvement</li> <li>➤ Early Management</li> <li>➤ Autonomous Maintenance</li> </ul>	<ul style="list-style-type: none"> <li>➤ Standard Work Sequence</li> <li>➤ Takt Time</li> <li>➤ Line Balancing</li> <li>➤ Standard Work-In-Process</li> </ul>
Material Replenishment Systems	Value Stream Mapping
<ul style="list-style-type: none"> <li>➤ Direct Pull</li> <li>➤ Signal Pull</li> <li>➤ Two-bin Pull</li> <li>➤ Kanban Pull</li> <li>➤ Supermarket Pull</li> </ul>	<ul style="list-style-type: none"> <li>➤ Current State Mapping</li> <li>➤ Future State Mapping</li> </ul>
Process Mapping Tools	Measurable Customer Requirements



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<ul style="list-style-type: none"> <li>➤ SIPOC Diagrams</li> <li>➤ Process Flow Charts</li> <li>➤ Process Sequence Charts</li> <li>➤ Brown Paper Exercise</li> <li>➤ Waste Walking</li> </ul>	<ul style="list-style-type: none"> <li>➤ Quality</li> <li>➤ Cost</li> <li>➤ Delivery</li> </ul>
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**Course Duration:** 10 non consecutive days (full time)

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**Project durations:** maximum of 6 Months

**Total Cost:** R32 000 per person

**Venue:** Sandton Lodge Rivonia – Johannesburg

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#### g. Six Sigma Champion

The Six Sigma Champion Leadership program takes a verified approach for enhancing business performance. Essentially, this is recognized as Six Sigma. Our integrated and methodical style of process improvement concentrates on results which are based on the statistical examination of data rather than theories. The purpose of Six Sigma is to finish projects with quantifiable business results that yields wither a soft-money or hard-money saving for the business.

Managers or administrators who patron projects and make sure that Six Sigma processes are being put into an organization are known as “Champions”. These people are provided training in regards to the fundamentals of Six Sigma methods. The primary objective of Six Sigma Champion Leadership training is to educate the individuals in the class and provide them with the necessary skills in order to select useful projects that are centered on the mission and objectives of the company. Moreover, Champions not only have to choose which projects are meaningful to the larger aims of the business, but they have the task of selecting and teaching Six Sigma project leaders. These project leaders are called “Belts”. The Champion’s main function is to lend support and implement Six Sigma processes and methods within the company while making sure that the process correlates with larger business objectives and initiatives.

Six Sigma South Africa is a subsidiary of 2KO International in Cape Town, conducting instructor led Six Sigma training and certification for blue chip companies in and around Africa.

Our On-Site Six Sigma Champion Leadership Training Covers:

#### Highlights of Six Sigma

- Live contact with a certified Master Black Belt teacher that has actual real-world experience with Six Sigma projects
- Assistance involving implementing Six Sigma
- All-inclusive samples of projects
- Detailed Project Charter models
- Reduced rate for any kind of onsite implementation assistance
- There is a snack given out during the morning hours and afternoon
- An enticing light lunch is given to students every day except on Fridays for most localities
- We provide manuals to our students, and they are color and laser printed
- Practice exercises that are educational, entertaining and fun!
- Gratifying environment suitable for training and one that students appreciate

#### 2 Day – Leadership Champion Training for Six Sigma-Schedule

- Introduction to Six Sigma
- Tactics and advantages involving Six Sigma

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- How to begin with Six Sigma
- Project definition for Six Sigma
- Six Sigma Example Projects
- Process involving project selection
- Six Sigma Distribution and how to choose Black Belts
- Development of metrics with Six Sigma Projects
- Recognition of Six Sigma
- Learning what Lean Six Sigma is all about
- Incorporation of Six Sigma and Lean methods
- Fundamental tools of Six Sigma
- Systems of Measurement
- Capability Study
- How to apply Six Sigma to Business Processes
- Keeping track and the management of Six Sigma Projects
- Handling alterations within the Six Sigma Process
- Monetary Strategies for Six Sigma Projects

**Pre-requisite:**

Master Black Belt

**Course Duration:**

2 days (full time)

**Cost:**

R9 995

**Venue:**

Sandton Lodge Rivonia – Johannesburg

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#### h. Design for Six Sigma

Design for Six Sigma (DFSS) uses Six Sigma methodology to develop products, services, and processes which result in increased efficiency, added profitability, and greater customer satisfaction. DFSS or Design for Six Sigma uses Six Sigma methodologies and tools during the development phase of a new product, service, or process. Furthermore, our program goes one step further by including “the voice of the customer” and simulation or testing techniques that are used to show the effectiveness or weaknesses of new designs.

Although individuals without prior knowledge can take the DFSS program, students who are already versed in the Six Sigma methodology will often receive the most benefits. In many cases, students will complete a Six Sigma Green Belt or Black Belt course, while the DFSS – Design for Six Sigma program supplements learning and provides more knowledge.

With this in mind, who should attend Design for Six Sigma (DFSS)?

This program is perfectly suited for students involved in marketing or product development. It is also a great match for anyone who is tasked with implementing a new process, developing a new product, or creating a new service. As mentioned above, students with no prior experience may join this training, but Green Belts and Black Belts who are familiar with Six Sigma methodologies may get the most benefit from these concepts.

Throughout this training, we will look at proven methods to determine a client’s needs. As with any Six Sigma methodology, this is done through statistical analysis by translating the information into QFD used within the design model creation and valuation. There is no guesswork in Six Sigma or Design for Six Sigma.

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**Course Duration:**  
5 days (full time)

**Cost:**  
R9 995

**Venue:**  
Sandton Lodge Rivonia – Johannesburg

**IASSC Accredited training provider:** The International Association for Six Sigma Certification (IASSC) is a Professional Association dedicated to growing and enhancing the standards within the Lean Six Sigma Community. <http://www.iassc.org/>

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i. Lean Six Sigma IT

This program has been created to deliver real-world examples along with optimal practices for the industry, including Software Application Development and IT Management, and integrating precise Six Sigma Lean tools for maximum performance. It also integrates foundational comprehension regarding Business Process Management as a discipline and the role that Information Technology plays in these programs. The courses are taught by qualified Lean Six Sigma and IT Experts. Focused toward organizations and individuals who desire to streamline his or her MIS/IT functions and augment overall customer satisfaction, Six Sigma South Africa offers IT training using successfully-proven techniques. This program is delivered over four successive days. No Preconditions are needed for the Lean Six Sigma IT program.

Key Learning Goals:

- Comprehend the critical things so you can measure in engineering situations.
- Comprehend opportunity areas in order to augment quality and speed.
- Recognize what makes software dissimilar to various other Six Sigma applications.
- How to rapidly detect the highest error-prone areas within the process.
- Know the large areas to control when it comes to maturity frameworks (ITIL and CMM).
- How to succeed and control the SDLC without causing delays.
- Be able to overcome the infamous “not invented here” syndrome.
- Comprehend how to utilize repetitive DMADV techniques within the SDLC.
- Software Topics and Lean Six Sigma IT.
- Understand the application of Six Sigma methods in CMM frameworks.
- Be able to utilize Six Sigma within ITIL & CobiT governance contexts
- Use Six Sigma methods when it comes to Iterative Software Development Lifecycles, also known as SDLC.
- Understand the famous DMAIC method for software product engineering.
- Learn the DMAIC method for package creation or custom deployments.
- Develop software by utilizing QFD, DFSS and Kano Analysis.

Obtain adoption regarding Six Sigma within the MIS/IT groups.

Software Topics and Lean Six Sigma IT

- The application of Six Sigma methods in CMM frameworks
- Six Sigma utilization within ITIL & CobiT governance contexts
- How to use Six Sigma methods when it comes to Iterative Software Development Lifecycles, also known as SDLC
- The famous DMAIC method for software product engineering
- DMAIC method for package creation or custom deployments
- Developing software by utilizing QFD, DFSS and Kano Analysis
- Obtaining adoption regarding Six Sigma within the MIS/IT groups



- IT Project Manager receiving techniques of Six Sigma

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**Pre-requisite:**

IT and Six Sigma expertise

**Course Duration:**

4 days (full time)

**Cost:**

R9 995

**Venue:**

Sandton Lodge Rivonia – Johannesburg

**IASSC Accredited training provider:** The International Association for Six Sigma Certification (IASSC) is a Professional Association dedicated to growing and enhancing the standards within the Lean Six Sigma Community.

<http://www.iassc.org/>



j. Six Sigma Green Process Management

Are you someone that is not sure about what it means to be “Going green?” Do you need to know about Green for business operations in contemporary society? No matter what kind of business you are involved in, whether it is the service industry or industrial sector, you have to have a good comprehension of what Green is and its associated environmental necessities and how this plays a role within your company and the work you do.

The term “Going green” has become a common catchphrase over the last few years, and now more than ever, numerous businesses are making the claim that their company is “green.” Whether or not this is actually true really depends on your understanding of what “green” truly means. Ironically, many people use the term “green” without a clue to its integral meaning. Only the small picture of this word is seen, not the larger one. Many people have various belief systems regarding climate change and impacts from businesses that produce toxins into the atmosphere (and we are not only talking about your typical factory setting that is burning waste and emitting smoke from the tall chimney stack). The concept of “green” will be sticking around regardless of where your belief system lies. In modern day society, it is becoming more apparent that in order to stay successful, your company may have no alternative but to address this problem and the environmental issues that have made headline news. Now is the perfect time for your business to “go green.”

**Course Duration:**  
5 days (full time)

**Cost:**  
R9 995

**Venue:**  
Sandton Lodge Rivonia – Johannesburg

**IASSC Accredited training provider:** The International Association for Six Sigma Certification (IASSC) is a Professional Association dedicated to growing and enhancing the standards within the Lean Six Sigma Community.

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#### k. Lean Office and Service

##### Take Lean Beyond the Shop Floor to Improve Profitability

Administrative functions account for sixty to eighty percent of the cost of meeting customer demand. Streamlining and eliminating waste from your office and administrative processes using Lean concepts, tools, and methods will help you achieve significant bottom-line savings. This five-day certificate program presents a structured way to understand how a firm delivers value in its services, how to prioritize operational improvement opportunities, and how to link them to strategic priorities.

##### Key Learning Outcomes

- Identify what you need to do better in your services to support your strategy
- Understand how to improve efficiency of your office/service processes
- Create an action plan for your Lean improvement initiative
- Translate your Lean efforts into financial terms
- Learn easy hands-on tools that anyone can implement in an office/back-office/service setting

##### Experienced Faculty

This experiential course focused on Lean office and business process improvement. Our instructors have years of industry experience coaching and training Lean implementations.

##### Hands-On Practice and Real World Examples

Hands-on simulations supplement lectures, exercises, and case studies to make this training meaningful and enlightening. We prepare you to take these tools and techniques back to your facility so you can begin implementing and transforming your traditional operations to Lean.

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#### l. Lean Product Development

**2KO International – Six Sigma South Africa**

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### Capture the Potential of Lean Thinking

Learn essential strategies and key tools that will decrease time-to-market, reduce waste, streamline product development processes, enhance product quality, and fully integrate new product designs into a Lean production environment.

This five-day program trains product development engineers and new product team members in Lean concepts, tools, and methods essential to the Toyota Product Development System (TPDS). Each day offers a set of learning objectives that enable participants to understand and appreciate the Lean product development process and its tools. Collectively, these objectives prepare participants to implement Lean development in their organization.

### Lean Product Development Program Component

#### Overview of Lean Product Development:

- Introduction to the Toyota Product Development System: How It Works and Key Benefits
- Problems with traditional product development
- Overview of workflow within a lean product development system
- The role of the customer, employees and organization
- Traditional Lean Product Development Simulation
- Illustrates typical wastes
- Tracks metrics associated with traditional wastes

#### The Lean Tools of Toyota Product Development System:

- Principles of Nemawashi
- Principles of Ringi
- Creating effective A3 reports for Lean Product Development
- Hoshin management

#### Lean Value Stream Mapping for Lean Product Development:

- Introduction to value stream mapping
- Mapping the current state
- Lean product development principles
- Mapping the future state
- Creating an implementation plan

#### Survey of Advanced Design Tools in a Lean Product Development System:

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- Error proofing
- Process for systematic error proofing
- Definitions and applications

#### Tools for Lean Launch and Implementation Planning

- Introduction to the 3P
- Lean Manufacturing Cell Design
- Material Flow Planning
- Lean Part Presentation

#### Lean Product Development

- Simulations
- Apply lean tools and techniques to the product development process
- Track the metrics and realize the impact

#### **Course Duration:**

5 days (full time)

#### **Cost:**

R9 995

#### **Venue:**

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m. Two-Day Toyota Kata

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Six Sigma South Africa now supplies Toyota Kata training in Johannesburg, South Africa. If you need more detailed information about this course please download the course outline at the bottom of the page. If you need more information about our Six Sigma courses, onsite training, course specials, different course requirements or six sigma consultation.

### **Participants Benefits**

During this workshop, participants will:

- Obtain a basic understanding of the Toyota Improvement kata trajectory (i.e. ,Vision/Challenge, Current Condition, Target Condition, Obstacles, PCDA)
- Have an appreciation for the value of the Toyota Coaching Kata Methodology (i.e. ,how the value Adds, Learner and first and second Coaches interact)
- Gain an appreciation of how the Toyota Improvement and Coaching Kata can rejuvenate a Lean Initiative and supply a basis for moving confidently/successfully into the future.

### **Course Overview:**

#### Day One

- Kata Overview
- Direction
- Current Condition
- Round 1 Simulation (block diagrams, obstacles, exit-cycle times, run charts)
- Round 2 Simulation (planned cycle time, run charts, current conditions)
- Target Condition
- PDCA Cycles (systematic iteration)
- Round 3 Simulation (1st PDCA on a selected obstacle)

#### Day Two

- Coaching Kata
- Round 4 Simulation (2nd PDCA on a selected obstacle)
- Participants experience the roles of Learners and 1st Coach
- Overview of Example Kata Journeys. Examples of La-Z Boy and other company Kata deployments and details of their journey
- Participants share individual/team observations and participate in group Q&A
- Wrap up, evaluations and feedback

### **Course Duration:**

2 days (full time)

### **Cost:**

R4 500

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**Venue:**

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