

MSC Malaysia Capability Development Programme

Six Sigma
(CDP Six Sigma)

Guide Book

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1. About Six Sigma

1.1 What is Six Sigma?

Statistically speaking

Six Sigma is a measure of quality that strives for near perfection. The Six Sigma process uses data and rigorous statistical analysis to identify "defects" in a process or product, reduce variability, and achieve as close to zero defects as possible.

Using a universal measurement scale, Six Sigma defines and estimates the opportunities for error and calculates defects in the same way every time, thus offering a means for measuring improvement. In fact, Six Sigma takes its name from the Greek letter "sigma," which is used in statistics to indicate standard deviation.

The Six Sigma methodology incorporates this data and statistical analysis into a project-based workflow that allows businesses to make intelligent decisions about where and how to incorporate improvements.

Business Language

Six Sigma methodology is a proven tool set for driving and achieving transformational change within an organization. It is a business improvement process that focuses an organization on customer requirements, process alignment, analytical rigor, and timely execution.

Ultimately, Six Sigma is about more than numbers. It's a highly disciplined methodology and practice that provides the tools you need to achieve consistent, high-performance results from your products and processes.

By increasing performance and decreasing variation, Six Sigma allows organizations like yours to make customer-focused, data-driven decisions that ultimately yield a reduction in product defects, increased profits and employee morale, and high-quality products - a win-win situation for everyone involved.

(Source: Motorola official website; <http://muexternalpartnership.motorola.com/index.htm>)

1.2 How can Six Sigma projects benefit us?

General benefits of Six Sigma Projects

Financial Benefits of Six Sigma Projects

- ✓ Creates additional/new revenue
- ✓ Creates cost savings through tax avoidance
- ✓ Enables cost avoidance
- ✓ Faster return on investments
- ✓ Increases cash flow
- ✓ Increases profitability of existing products/services
- ✓ Increases revenue of existing sources
- ✓ Increases stock price/shareholder value
- ✓ Lowers cost of production and servicing

Organizational Benefits of Six Sigma Projects

- ✓ Builds company reputation
- ✓ Creates new customer opportunities
- ✓ Fosters company vision and mission
- ✓ Improves market position relative to competitors
- ✓ Improves the ability to serve customers
- ✓ Increases competitiveness and ability to charge a premium

Operational Benefits of Six Sigma Projects

- ✓ Decreases employee work loads for undesirable work
- ✓ Eliminates non-value added activities
- ✓ Improves employee morale / team spirit
- ✓ Improves internal communication between departments and groups
- ✓ Improves use of workspace
- ✓ Increases employee and process productivity
- ✓ Reduces cycle time of production/process
- ✓ Reduces external inputs to processes
- ✓ Reduces person-hours
- ✓ Simplifies processes and workflow steps

Information Technology Benefits of Six Sigma Projects

- ✓ Decreases maintenance/support costs
- ✓ Enables service level agreement (SLA) obligations
- ✓ Improves application/system performance
- ✓ Improves application/system utilization rate
- ✓ Increases efficiency of support activities
- ✓ Increases productivity through automation
- ✓ Maintains intellectual property investment
- ✓ Preserves value of technology
- ✓ Reduces application/system variation (increases reliability)
- ✓ Reduces paper documentation requirements
- ✓ Strengthens application/system security

(Source: <http://www.isixsigma.com/library/content/c011112a.asp>)

2. MSC Malaysia Capability Development Programme- Six Sigma (CDP Six Sigma)

2.1 About the programme

Malaysian ICT organisations are realising quickly, as any organisation in this region, that there is much more to be done in enhancing their capabilities and increasing competitiveness for the export of their services. ICT establishments need to be on par with competitors in terms of standards and best practices adoption to benchmark processes and the quality of products or services. In view of that, the MSC Malaysia Capability Development Programme was introduced by MdeC to enhance competitiveness of local companies via multiple programmes that were offered with financial incentives, which focused on awareness and adoption of global standards and best practices.

Based on the tremendous potential benefits of Six Sigma projects, this programme was created to assist MSC Malaysia status companies to successfully adopt the Six Sigma methodologies. The achievements of local ICT organisations via these programmes are inline with MSC Malaysia's Next Leap objective of building a viable local ICT industry. A viable local ICT industry with a strong focus on quality improvements will ensure the development of more capable homegrown technologies and eventually contributes to the nation's sales and export revenue.

MDeC **will reimburse 50% or RM 100,000.00** (whichever is lower) of the total programme investment to the participating companies in the programme.

2.2 Programme objective

The general objectives of the programme are to:

- Raise the standards and competitiveness of MSC Malaysia as ICT hub that provide quality products and services by increasing the take up rate of best practices and certifications.
- Create awareness amongst MSC Malaysia Status Companies the importance adopting new best practices and standards.
- Furnish assistance & initiatives to MSC Malaysia Status Companies in implementing new best practices such as Six Sigma.
- Provide a structured and flexible approach for MSC Malaysia Status Companies to participate in MSC Malaysia Capability Development Programmes such as Six Sigma based on readiness level, industry clusters and lifecycle stages

The **specific** objectives of this programme are:

- To provide incentive to participating companies to successfully train and coach Six Sigma Green Belt or Black Belt holder.
- To provide incentive to participating companies to successfully complete a Six Sigma project that creates **sustainable** savings.

2.3 Programme scope

The CDP Six Sigma programme will cover investment in these activities:

- 1) Trainings
 - a. Six Sigma Champion training,
 - b. Management training,
 - c. Green Belt or Black Belt training
 - d. Other Belt (Yellow) Belt training
- 2) Certification
 - a. Green Belt or Black Belt Certification
- 3) Consultancy and Advisory
 - a. Project Selection
 - b. Project Coaching
 - c. Project Tracking
 - d. Project Validation

Applicants are free to:

- 1) Send in any number of their member for this programme,
- 2) Select the types of certification that suits them; (e.g.: Black Belt or Green Belt or combination of them)

However, MDeC will only reimburse 50% or RM 100,000 (whichever is lower) to the participating company.

2.4 Programme duration

The programme will run from January 2007 until 31st December 2010.

3. Application Guideline

3.1 Eligibility

The CDP Six Sigma Programme is designed for **MSC Malaysia status** companies, with these criteria:

- All companies must be at least **51 % Malaysian** owned.
- Staff strength of more than **20 full time** staff
- Annual turnover of more than **RM 1 million**
- Must be willing to commit resources (Financial and Human Capital resources) to complete the whole programme.
- Must be willing to participate in activities organized by MDeC, such as talks and seminars

3.2 Programme application period and programme duration

The programme will be run from January 2007 until 31st December 2010. The Six Sigma projects will have to be completed before 31st December 2010.

3.3 Programme Secretariat

The programme secretariat will be the focal point of the programme. All enquiries regarding the programme should be directed to the secretariat at the following address:

CDP Six Sigma Programme Secretariat
Capability Development Department,
Multimedia Development Corporation Sdn. Bhd.,
MSC Headquarters
2360 Persiaran APEC
63000 Cyberjaya
Selangor Darul Ehsan

Attention: Ir. Ahmad Syahrir Mohd Shuib
Email: syahrir@mdec.com.my

Telephone : (03) 8315 3383, Fax: (03) 8318 8511

3.4 Application guideline

The application form can be obtained from the Secretariat or downloaded from <http://cdp.msc.com.my> under the Capability Development Programme section. All sections of the application form have to be completed with supporting documents wherever required. Before filling in an application form, please read this Guide carefully. Each applicant company should submit only one application form for the Programme. No application fee will be charged.

The application form with all supporting documents should be sent to the Secretariat.

MDeC reserves the right to amend or delete any section of this Application for Incentive at any time without prior notice in order to give effect to any change in policy or to correct any error, omission, ambiguity or inconsistency that may arise. In the event of any amendments to the application document, all applicants will be notified accordingly.

All applications shall be in English; or if not in English, shall include an English translation as an attachment. The appendices can be submitted in Bahasa Malaysia or English.

MDeC shall not be liable to any payment or costs incurred in the preparation and submission of the Application Form. All expenses incurred by the applicants in providing the application shall be borne by the applicants themselves. No advertisement or press release regarding the application shall be published in any newspaper, magazine or any other form of media, electronic or otherwise.

After the issuance of the Application Form, information relating to the contents, examination, evaluation and recommendations concerning will not be disclosed to persons not officially concerned with the process. MDeC is not obliged to inform or provide the details of the incentive evaluation process either the successful or unsuccessful applicants in Application of Incentive.

The application will be screened for completeness. If an application cannot be assessed due to insufficient information, the secretariat will send a Request for Information (RFI) letter to the applicants.

The successful application (if any) shall be notified in writing through Letter of Eligibility.

3.5 Service provider selection

Applicants need to obtain three (3) quotations from service providers. As each applicant may have its own considerations on cost, practice and quality requirement, the applicant is free to choose any Six Sigma service providers. However, if the lowest bid is not selected, a justification must be given. In case that less than three vendors' quotations are obtained, explanation must also be given. Once the Six Sigma service provider is selected, the applicant should submit to the Secretariat the received quotations, the quotation selection justification and a schedule of project for reference. The applicants would need to ensure that the proposals should include the following information:

- Company name, address, telephone number, fax number and e-mail address
- Name of person(s) who will be the principal contact
- A statement declaring the accuracy and completeness of ALL information provided in the proposal
- Summary of company profile
- Summary of proposed solution and its key features
- The itemised costing and total price for the whole project
- Summary of major work tasks and milestones proposed to ensure successful implementation of the project
- Experience and client references in the area of services

The Secretariat will check the reasonableness of the price and the schedule in the quotations. If the Secretariat is not satisfied, the applicant will be required to discuss with the service provider and resubmit the related documents.

3.6 Service Provider Approval guideline

Completed submission will be screened by the Secretariat and reviewed by Capability Development Committee (CDC). Following, recommendations will be made to MDeC Management. Upon approval, a Letter of Offer will be sent to the applicant to inform on the decision.

3.7 Notification of Service Provider Approval application result

Applicants will be notified of their application result within 4 weeks of submission of application.

3.8 Formal agreement

The successful applicant will be required to sign a formal agreement with MDeC and comply with all the terms and conditions laid down in the agreement, this Guideline and all instructions and correspondences issued by the Secretariat from time to time in respect of the Programme and the approved application.

The process of the MSC Malaysia Six Sigma Program application and evaluation process can be summarized as per Figure 1.

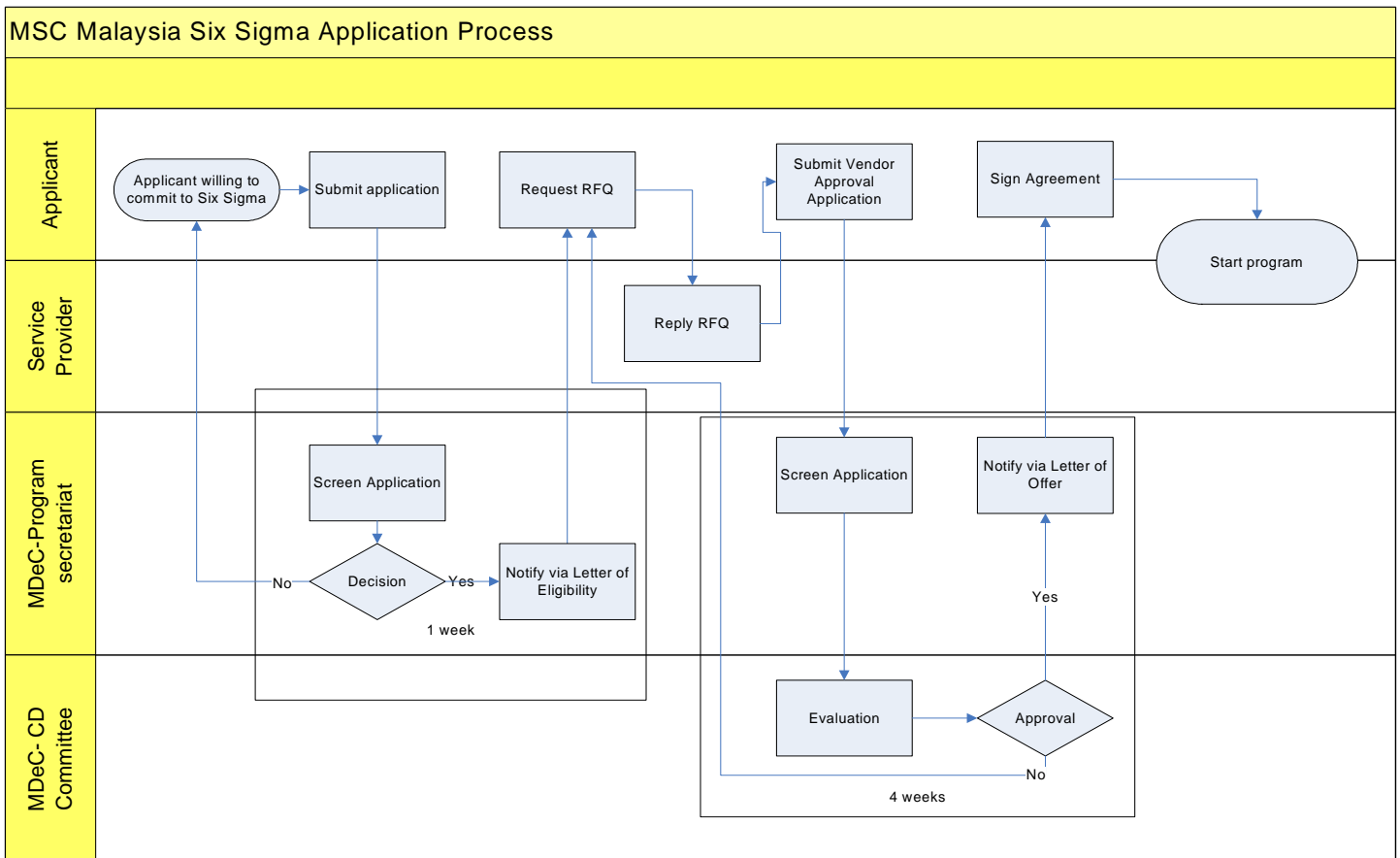


Figure 1: Application process flow

4. Programme Requirement

4.1 Progress reports and meetings

Participating companies are required to present progress report during their **bi-monthly** meeting with the secretariat. A progress report has to be submitted during the meeting.

4.2 Savings tracking

Participating companies are required to monitor and document the savings generated from the Six Sigma projects for **at least 6 months** from completion of the project to verify sustainable savings. These tracking has to be reported to the Secretariat on a **bi-monthly** basis.

5. Programme Completion

5.1 Definition of completion

A participating company is defined as completing the programme when they have fulfilled these criteria:

- 1) Successfully trained at least one Six Sigma Green Belt or Black Belt
- 2) Successfully completed a savings generating Six Sigma project
- 3) Successfully proved that the savings were sustainable for **at least 6 months**
- 4) Successfully proved that the savings were are equivalent to the **programme investment.**

- ❖ Participating companies are required to do a presentation to the Secretariat on the Six Sigma project upon completion.

6. Reimbursement Guide

6.1 Reimbursement guide

Reimbursement will be done only after a participating company has successfully completed the programme. (Please refer to item 5.1 for definition of completion)

MDeC will reimburse to the participating companies through issuance of cheque.

6.2 Reimbursement scope

MDeC will only reimburse investments relating to these activities:

- 1) Trainings
 - Six Sigma Champion training,
 - Management training,
 - Green Belt or Black Belt training
 - Other Belt (Yellow) Belt training
- 2) Certification
 - Green Belt or Black Belt Certification
- 3) Consultancy and Advisory
 - Project Selection
 - Project Coaching
 - Project Tracking
 - Project Validation

6.3 Reimbursement

Reimbursement will be done after project completion.

6.4 Items required for reimbursement claims

Items required are:

- 1) Reimbursement Claim Form (Form B-1)
- 2) Proof of payment to Service Provider
- 3) Green Belt or Black Belt certificate
- 4) Six Sigma Project report
- 5) 6 months savings report

The reimbursement process is summarized in Figure 2.

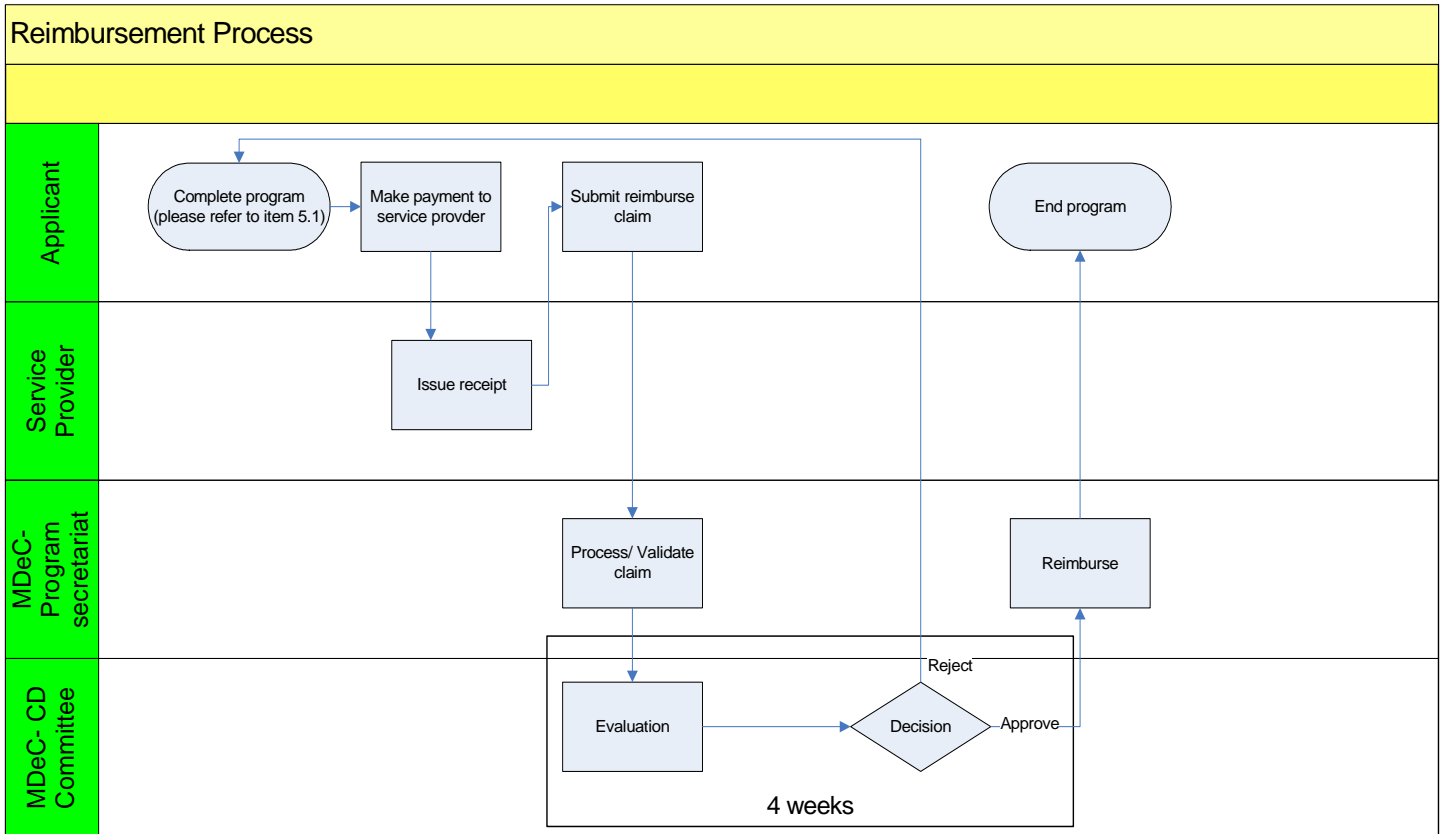


Figure 2: Reimbursement process flow

7. Administrative Matters

7.1 Suspension or termination of Programme funding

MDeC may terminate an approved application or suspend the disbursement at any time for reasons which include, lack of progress of the six Sigma programme in a material way; slim chance of completion of the Six Sigma Programme in accordance with the application form; change of company status or management structure that is considered to affect the original planning; or MDeC sees fit to terminate the approved application in view of public interest.

7.2 Change of company status and project details

An approved application is required to be carried out strictly in accordance with its application form appended to the agreement. The applicant must inform the Secretariat in writing for any modification, amendment or addition to the application form or the agreement, including change of company status, project in-charge, management structure, project commencement or completion dates, service providers, assessment scope, methodology, fee schedule, etc. The Secretariat reserves the right to react to these changes.

7.3 Procurement Procedures

All quotations and tendering documents from the service provider related to the application of the Programme should be kept by the applicant for MDeC's inspection for at least two years after completion of the approved application or termination of the agreement, or as otherwise specified by the Secretariat within that two-year period.

8. Contact Detail

CDP Six Sigma Programme Secretariat
Capability Development Department,
Multimedia Development Corporation Sdn. Bhd.,
MSC Headquarters
2360 Persiaran APEC
63000 Cyberjaya
Selangor Darul Ehsan

Attention: Ir. Ahmad Syahrir Mohd Shuib
Email: syahrir@mdec.com.my

Telephone : (03) 8315 3383, Fax: (03) 8318 8511

9. Glossary

Applicant	MSC Malaysia status companies that have submitted applications to MDeC to enrol in the programme
Black Belt	<p>Six Sigma team leaders responsible for implementing process improvement projects within the business -- to increase customer satisfaction levels and business productivity. Black Belts are knowledgeable and skilled in the use of the Six Sigma methodology and tools.</p> <p>Black Belts have typically completed four weeks of Six Sigma training, and have demonstrated mastery of the subject matter through the completion of project(s) and an exam.</p> <p>Black Belts coach Green Belts.</p>
CDC	Capability Development Committee; an internal MDeC committee responsible for funding approval
Green Belt	<p>An employee of an organization who has been trained on the improvement methodology of Six Sigma and will lead a process improvement or quality improvement team as *part* of their full time job. Their degree of knowledge and skills associated with Six Sigma is less than that of a <u>Black Belt</u>. Extensive product knowledge in their company is a must in their task of process improvement.</p> <p>The green belt employee plays an important role in executing the Six Sigma process at an organization level.</p>
MDeC	Multimedia Development Corporation Sdn Bhd
MSC Malaysia	Multimedia Super Corridor Malaysia
Participant	MSC Malaysia Status companies that have been approved by MDeC to participate in the programme
Service Provider	Organization that will train, certify, advise and consult the Participant
Six Sigma	Six Sigma is a methodology to manage process variations that cause defects, defined as unacceptable deviation from the mean or target; and to systematically work towards managing variation to eliminate those defects.