



DMAIC Black Belt Certification Recommendation

Name _____ (as it will appear on the certificate)

IQF Member Number _____

Address _____

City State, Zip _____

Country _____

We the undersigned, on behalf of the Sponsoring Organization, certify the above named individual as a Six Sigma DMAIC Black Belt within our organization. We further attest that he or she has met the requirements specified by the International Quality Federation (IQF) and recommend that the IQF recognize him or her as an IQF Certified Black Belt.

Evaluator Name (Board Member)	Signature	Date

IQF Six Sigma DMAIC Black Belt Skill Set Certification Process

Introduction

This document describes the process and provides the minimum acceptable criteria for certifying an individual as an IQF Six Sigma DMAIC Black Belt. IQF certification involves recognition by the IQF Six Sigma Black Belt's Sponsoring Organization and his or her peers, and should not be construed as a professional license.

Process

The IQF and the candidate's Sponsoring Organization determine recognition as an IQF Six Sigma Black Belt jointly. The respective roles are:

IQF

IQF certification requires that the applicant pass the IQF Black Belt Exam. The examination covers the core skill set of the Black Belt Body of Knowledge (BOK) as defined by the IQF. The IQF will score the candidate and determine if their score meets the IQF's minimum passing score for each section of the BOK, as well as for the overall score.

The IQF also provides the Sponsoring Organization with criteria for assessing the candidate's effectiveness by evaluating the candidate's

- Ability to achieve significant, tangible results by applying the DMAIC Six Sigma approach
- Ability to lead organizational change as demonstrated by the candidate's leadership, teamwork, project management, and communication skills.

Sponsoring Organization

The exam is to be administered by the applicant's Sponsoring Organization and proctored by an agent of the Sponsoring Organization. The Sponsoring Organization is responsible for assuring the integrity of the exam, verifying the identity of the candidate sitting for the exam, and enforcing time limits.

The Sponsoring Organization will evaluate the candidate's effectiveness using the IQF requirements and will notify the IQF when a candidate who has passed the IQF BOK exam has met the effectiveness requirements.

Sponsoring Organizations need not be the candidate's employer. Accredited colleges or universities as well as not for profit organizations may serve as a candidate's sponsor. However, the candidate must complete at least two successful major projects applying the DMAIC Six Sigma approach to significant production or service processes.

Co-certification

Candidates who pass the IQF exam and meet IQF effectiveness requirements will be co-certified by the IQF and the Sponsoring Organization as an IQF Six Sigma DMAIC Black Belt.

IQF Black Belt Effectiveness Certification Criteria

This section describes the criteria for certifying that an IQF Six Sigma DMAIC Black Belt candidate is “effective” in applying the Six Sigma approach. Effectiveness means that the candidate has demonstrated the ability to lead the change process in an organization by successfully applying six sigma methodologies on more than one significant project. Success is demonstrated by achieving documented substantial, sustained, and tangible results. Examples of results are cost savings or cost avoidance validated by finance and accounting experts, improved customer satisfaction, reduced cycle time, increased revenues and profits, reduced accident rates, improved morale, reduction of critical to customer defects, etc. Merely demonstrating the use of six sigma tools is **not** sufficient. Nor is the delivery of intermediate “products” such as Pareto diagrams or process maps.

In addition to passing the IQF BOK exam, certification requires the following:

1. Acceptable completion of a black belt training curriculum approved by the Sponsoring Organization.
2. Demonstration of clear and rational thought process.
 - a. Ability to analyze a problem following a logical sequence,
 - b. Usage of facts and data to guide decisions and action.
3. Be able to clearly explain Six Sigma and the DMAIC project cycle in layman’s terms.
4. Ability to achieve tangible results, e.g.,
 - a. Completed two or more projects which employed the DMAIC Six Sigma approach.
 - i. Projects reviewed by appropriate personnel.
 - ii. Deliverables accepted by the project sponsor.
 - iii. Projects documented in the manner prescribed by the Sponsoring Organization.
 - iv. Projects used the Six Sigma approach and correctly employed a significant subset of basic, intermediate, and advanced DMAIC Six Sigma tools and techniques
 - b. Ability to perform benefit/cost analysis,
 - c. Ability to quantify deliverables in terms meaningful to the organization, e.g., cost, quality, cycle time, safety improvement, etc.
 - d. Ability to identify and overcome obstacles to progress,
 - e. Ability to work within time, budget, and operational constraints.
5. Demonstrated ability to explain the DMAIC tools of Six Sigma to others.
6. Demonstrate interpersonal and leadership skills necessary to be an effective change agent within the organization.

IQF Black Belt Certification Board

The IQF recommends that each area of effectiveness be rated by at least two qualified individuals. The table below provides guidelines for identifying members of the IQF Black Belt Certification Board.

Table 1: IQF Black Belt Certification Board Member Selection Guide

Assessment Subject Area	Board Member
Change agent skills	Supervisor, project sponsor, Six Sigma champion, mentor, process owner, Green Belt
Application of tools and techniques	Black Belt Instructor, Master Black Belt, IQF Certified Master Black Belt Consultant
Ability to achieve results	Project sponsor, process owner, team members, Green Belt, Six Sigma champion, IQF Certified Master Black Belt consultant

Effectiveness Questionnaire

The IQF provides questionnaires to assist IQF Certification Board Members with their assessment. It is strongly recommended that the candidate perform a self-assessment using the IQF questionnaire prior to applying for certification. The candidate should provide the Six Sigma champion with a list of potential members of his or her Certification Board.

The effectiveness questionnaire includes a set of assessment questions for each subject area. The results of the questionnaires can be summarized and used as input into the Sponsoring Organization's certification process. A form for this is provided below. The scoring summary sheet summarizes the evaluator's scores by category. Worksheet items scored in the top 3 boxes are considered to be acceptable. Particular attention should be directed to any worksheet item scored in the lower 4 boxes. Since there are 10 choices for each item, any score below 5 indicates that the evaluator disagreed with the survey item. Survey items are worded in such a way that evaluators should agree with them for qualified Black Belt candidates. Disagreement indicates an area for improvement. The scores are, of course, not the only input. The IQF Certification Board must also consider any other relevant factors before reaching their decision.

The Scoring Summary and Assessment Worksheets may be reproduced as necessary.

IQF Black Belt Notebook and Oral Review

IQF Black Belt candidates should provide Certification Board members with written documentation of their on the job applications of the Six Sigma approach. These "notebooks" should include all relevant information, including project charters, demonstrations of tool usage, samples of data used, excerpts of presentations to sponsors or leaders, team member names, project schedules and performance to these schedules, financial and other business results, etc. The notebooks can be distributed to Certification Board members as either soft copies or hard copies, at their discretion.

Even with the best documentation, it is difficult to assess effectiveness properly without providing the candidate the opportunity to present his or her work and respond to questions. Sponsoring Organizations should require that IQF Black Belt candidates deliver an oral presentation to the Certification Board. The oral review will also provide the Certification Board with a first hand demonstration of the candidate's communication skills.

Change Agent Skills Assessment Worksheet

Black Belt Candidate		Date of Assessment	
Certification Board Member		Role	

1. The candidate effectively identifies and recruits Six Sigma team members

Strongly Disagree

Strongly Agree

A horizontal row of ten empty square boxes, likely used for grading student responses.

2. The candidate effectively develops Six Sigma team dynamics and motivates participants

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

3. The candidate is able to apply conflict resolution techniques

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

4. The candidate is able to overcome obstacles to change

Strongly Disagree

Strongly Agree

A horizontal row of ten empty square boxes, evenly spaced, intended for the respondent to mark with an X or checkmark.

5. The candidate utilizes a logical approach to problem solving

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

6. The candidate effectively facilitates group discussions and meetings

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

7. The candidate's presentations are well organized and easy to understand

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

8. The candidate identifies and mobilizes sponsors for change

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

9. The candidate builds a shared vision of the desired state with champions and sponsors

10. The candidate effectively communicates with and obtains support from all levels of management

11. The candidate identifies gaps between as-is and desired performance

12. The candidate identifies and obtains support from all key stakeholders

Application of Tools and Techniques Assessment Worksheet

Black Belt Candidate		Date of Assessment	
Certification Board Member		Role	

1. The candidate uses an appropriate mix of basic, intermediate and advanced six sigma tools

Strongly Disagree

□ □ □ □ □ □ □ □ □ □

2. The candidate uses the tools of Six Sigma properly

Strongly Disagree

Strongly Agree

3. The candidate applies the correct six sigma tools at the proper point in the project

Strongly Disagree

Strongly Agree

- 4 The candidate asks for help with Six Sigma tools when necessary.

Strongly Disagree

Strongly Agree

5. The candidate has a working knowledge of word processors, spreadsheets, and presentation software.

Strongly Disagree

Strongly Agree

6. The candidate has a working knowledge of a full-featured statistical software package

Strongly Disagree

Strongly Agree

7. The candidate understands the limitations as well as the strengths of quantitative methods.

Strongly Disagree

Strongly Agree

Ability to Achieve Results Assessment Worksheet

Black Belt Candidate		Date of Assessment	
Certification Board Member		Role	

1. The candidate has completed more than one Six Sigma project which produced tangible results

Strongly Disagree

Strongly Agree

A horizontal row of ten empty square boxes, each with a small vertical line on its left side, intended for handwritten responses.

2. The candidate's projects had an acceptable project charter, including sponsorship, problem statement, business case, etc.

Strongly Disagree

Strongly Agree

3. The projects employed the Six Sigma approach (DMAIC or equivalent)

Strongly Disagree

Strongly Agree

4. The projects' deliverables were clearly defined in tangible terms

Strongly Disagree

Strongly Agree

□ □ □ □ □ □ □ □ □ □

5. The projects produced significant improvements to an important business process

Strongly Disagree

Strongly Agree

A horizontal row of ten empty square boxes, intended for students to write their answers in during a test or worksheet.

6. The current baseline sigma level was determined using valid data

Strongly Disagree

Strongly Agree

A horizontal row of ten small, empty square boxes. Each box contains a single white circle positioned near the top-left corner.

7. The final sigma level was calculated using valid data and showed improvements that were both statistically significant and important to the organization

Strongly Disagree

Strongly Agree

A horizontal row of ten small, empty square boxes, each representing a bit or digit in a binary sequence.

8. An acceptable control plan has been implemented to assure that improvements are maintained.

9. The projects' financial benefits were validated by experts in accounting or finance

10. Key customers were identified and their critical requirements defined

11. Project sponsors are satisfied with their project's deliverables

12. Projects identified and corrected root causes, not symptoms

Strongly Disagree Strongly Agree

13. All key stakeholders were kept informed of project status and are aware of final outcomes

14. Projects were completed on time

Strongly Disagree Strongly Agree

15. Projects were completed within budget

16. Projects were conducted in a manner that minimized disruptions to normal work

Assessment Comments

Assessment Subject Area	Comments
Change agent skills	
Application of tools and techniques	
Ability to achieve results	

Scoring Summary

Evaluator	Subject Area	Items scored 4 or less	% In top 3 boxes	Comment
	Change agent skills			
	Application of tools and techniques			
	Ability to achieve results			
	Change agent skills			
	Application of tools and techniques			
	Ability to achieve results			
	Change agent skills			
	Application of tools and techniques			
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