

## **Cascading Six Sigma Deployment for higher ROI**

### **Six Sigma - 24 Training Programme 2006/07**

Prof. Dr. Elena Averboukh, Fellow Master Black Belt

[www.sixsigma-24.de](http://www.sixsigma-24.de)

#### **1. Cascading Training Deployment – more Efficient (ROI) and Low Risk Solution**

Our experiences of the last years in Six Sigma Training and overall deployments show, that one of the most efficient and “low risk” training strategy for the client companies is a cascading one.

This scheme considers project-based training for all six sigma professionals in the company in the following sequence (especially when just starting the six sigma deployment)

- project sponsors and/or champions
- green belts,
- black belts (upgrade of certified and selected green belts), and
- master black belts (upgrade of certified and selected black belts)

Advantages of such scheme are the following:

- a) we have an ideal opportunity to monitor and evaluate the performance of the Green Belts during their training and first project,
- b) we may select the best Green Belts with proven performance and leadership skills for the future upgrade to the Black Belt,
- c) Green Belts themselves have enough opportunity to evaluate and to decide whether they are willing to challenge the Black Belt role and position in the company,
- d) There is already an infrastructure trained and established through the first Green Belt wave, including project Sponsors and/or Champions, when starting the Upgrade Black Belt training,
- e) The concept of further six sigma deployment and selection of the projects for the Black Belt upgrade when starting their upgrade training is much more elaborated, solid and efficient
- f) The investment for such training scheme is nearly similar as just to train one group of Black Belts, but the risk are much lower and ROI much higher.

Particularly, the following risks are lower in comparison with just training Black Belts first:

- Wrong selection of the Black Belt candidate (not sufficient leadership or communication or professional etc. skills),
- Management- and Team environment is not prepared for the deployment and, hence, barriers and low support from the team, slow progress in Black Belt projects,
- Black Belts are not willing to continue this path after the end of the training, or even leave the company, etc.

In many cases these particular issues reduce significantly the ROI into the Black Belt training and increase the risk, that the whole deployment fails.

It is certainly not the only way, and sometimes Black Belt training works pretty well and have an advantage, that certified Black Belt may start training and consulting/mentoring of the further Green Belt inside the company.

Still, even such big companies as Bombardier, Dupon, VDO Siemens etc. with many years experiences and successes in Six Sigma deployment worldwide and in Europe particularly are currently using the above cascading scheme.

## 2. Our Recommendation regarding Cascading Deployment

Below is a typically recommended training scheme with durations of the planning phase (P), training (T), project coaching (P) and certification (C) in days.

It is usually customised before the training start for particular client and/application company. We usually adopt duration of the planning phase, the number of participants, number of the Green Belt training waves before the Black Belt upgrade (maybe more than one), number and type of projects, curriculum for the BB upgrade course etc.

Generally recommended number of participants and projects in the training groups is the following:

### I. Six Sigma Deployment Planning Phase

- 1.1. Interviews with Six Sigma Programme Sponsors (4-7 days)
  - Each Interview – 2,5 h + 1,5 h debriefing, i.e 2 interviews per day
- 1.2. High-level data acquisition and analysis, preparing presentation for Six Sigma Sponsors (3,5 -5 days)
- 1.3. Sponsor /Champion Kick-Off Project Selection & Management Training (1,5 -2 days)
  - Up to 25 participants
  - 4 to 10 projects

9-14 days

## II. Green Belt

- Up to 10-15 participants
- 4 to 6 projects (team projects)

10 days in 3 to 5 sessions during 2-3 months

## III. Upgrade Black Belt

- Up to 10-15 participants
- individual projects

10 days in 3 to 5 sessions during 2-3 months

IV. **Coaching demand** – ½ day per project between each training session  
(e.g., 1 ½ day per project)

V. **Certification demand** – ½ day per project after the training

### 3. Example of Cascading Deployment

#### Planning Phase (interviews, data acquisition and analysis, Kick-Off Workshop 1 for Project Sponsors) 9 days

- 8 interviews (4 days)
- Data acquisition and analysis (3,5 days)
- Workshop 1 for Project Sponsors (1,5 day):
  - Max 25 participants
  - selection of 6 projects for Green Belt Training (1<sup>st</sup> wave)

#### Green Belt Training - Wave 1 (10 T + 9 P + 1 C= 20 days):

- 10 days training (10T) in 3to 5 sessions over 2-3 months (e.g. 3+4+3 days)
- 10-15 participants, 6 projects
- 3 x 6 x 1/2 = 9 days project coaching (9P)
- Certification – 1 day (1C)

#### Workshop 2 for Project Sponsors (0,5 day)

- Max 25 participants
- selection of 6 projects for Green Belt Training (2<sup>nd</sup> wave)

#### Green Belt Training - Wave 2 (10 T + 9 P + 1 C= 20 days):

- 10 days training (10T) in 3 to 5 sessions over 2-3 months (e.g. 3+4+3 days)
- 10-15 participants, 6 projects
- 3 x 6 x 1/2 = 9 days project coaching (9P)
- Certification – 1 day (1C)

### **Workshop 3 for Project Sponsors (0.5 day):**

- Max 25 participants
- selection of 4 projects for Black Belt Training

### **Upgrade Green Belt- to- Black Belt Training (10 T +3 P + C = 14 days)**

- 10 days training in 3 sessions over 2-3 months (e.g. 3+4+3 days)
- 2 x3 x 1/2 = 3 days coaching
- 4 participants, 4 projects
- Certification – 1 day

**Total:** 9 +20+0,5+20+0,5+14= **64 days**

## **4. Expected Benefit**

Annual Hard Savings:

Green Belt Project – 20.-50.000+ Euro

Black Belt Project – 100.000+ Euro

For 12 Green Belt Training Projects – 240.000-600.000 +Euro

For 4 Black Belt Training Projects – 400.000+Euro

**Total: 640,000-1.000.000 + Euro** in first year after the project completion

## **5. Recommended Training Programme**

For such cascading training scheme we offer modular course structure, particularly to be able to adopt it to the diverse need of different clients (manufacturing, service, finances etc.)

We follow different traditional Six Sigma roadmaps, like DMAIC (Define, Measure, Analyse, Improve, Control) and/or DFSS (Design for Six Sigma). More advanced techniques and tools for creative problem definition and problem solving (I-TRIZ), as

well as special advanced methods and tools for e businesses and software-hardware system designers and developers are integrated in our agenda's.

We usually recommend a DMAIC (with I-TRIZ) components curriculum for the first Green Belt waves, and offer the following modules for upgrade of the selected candidates to the Black Belt:

1.BB Advanced Statistics	4 days
2.BB Voice of Customers (VOC)	1-3 days
3.BB Transactional	1-3 days
4.BB Innovative Design (i-TRIZ)	3 days
5.BB E-business	5 days
6.BB Software-Hardware Systems Development	5 days

Each of the above modules have a next level for Master Black Belts upgrade, i.e. another 3-5 days each in average.

\* \* \*

We hope that this new approach may fit better to optimise your six sigma deployments and look forward to cooperate and assist you in this endeavour.

Your certified Green and Black Belts are most welcome to participate in our public Upgrade courses that we plan for 2006/07 (both in English, German and in Russian).

Please, check out Training Schedule where we publish the dates for the Public courses planned approximately 3-4 months in advance.

Welcome to [www.sixsigma-24.de](http://www.sixsigma-24.de) !