

Six Sigma in Sport

Few people know that Bob Hayes went under 10 seconds in the 100 meters race at the Olympic Games in Tokyo in 1964. The record now is 9.58 seconds which was run by Usain Bolt. Also in sport we can use improvement techniques like Six Sigma.

Six Sigma is a data driven process improvement methodology based on **DMAIC** cycle (Define – Measure-Analyze – Improve – Control). Examples of measurable indicators for the specific activity of sport can be: time running on distance ..., the number of laps of the stadium, the index of success in the competitions, pulse at the end of the competition, etc.



An example of a successful project using Six Sigma was "Improving running time in the 100 m / Athletics". The key indicator which give the performance of the process and choose to be improved is running time until the completion (T).

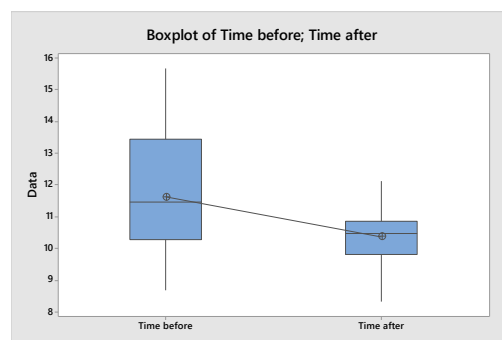
In **Define**, was identified and described the process (process map), was set the objective to be achieved and was established team to work on the project.

Were collected data for performance time (T) and for parameter which had influence, x-s (**Measure**). Identification of factors which influence T was made by IPO – see picture below. It could be use also: Cause – Effect or Ishikawa diagram or 5 Why.

Six Sigma Project : Improving running time in the 100 m /Athletics		
Date : 24.02.2017		
Team members : Ivan, Mihai, Elena		
Input	Process	Output
number of daily training sessions	Running 100 m	Running time 100 m
running distance for one training session		
surface condition on which is run		
time for one training session		
body weight		
body height		
the number of calories/day		

T was influenced by: number of daily training sessions (N) Time for one training session (t), running distance for one training session (D), body weight (G), body height (I), diet (the number of calories/day) (n), surface condition on which is run (slag, artificial turf, bitumen), etc. These parameters are called potential causes.

Using more advanced techniques - Hypothesis Testing – part of potential causes became root causes. In our case the root cause was the number training session per day / N (**Analyze**).



It proceeds to identify solutions that implemented would eliminate or diminish the negative effects for which it was made the project (**Improve**).

“Increasing the daily training session number from 2 to 3“, while preserving the training time of 2 hours per day, it was the chosen solution.

After implementation, time for 100 m running was monitoring in new conditions (**Control**). T gradually reduced and in 3 months was improved from 11.3 sec to 10.4 sec.

We invite you to Six Sigma courses organized by Effective Flux to reap the benefits of this methodology.